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Gender Differentiation in Personal and Professional Titles of Women in Modern Russian

by

Yuri Novikov ©

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in

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ABSTRACT

The purpose of the present study was to determine how various social factors influence the choice of gender in Russian referential terms. Besides, the study was designed to investigate the influence of some morphological properties of these noun-titles, as well as of some structural properties of the sentences in which these items are used, on gender differentiation.

The issues of language and culture, variation, and language change, which relate to the problem, are briefly discussed.

Gender differentiation was investigated in noun-titles, modifiers (adjectives, participles and pronouns) and past tense verbs referring to masculine noun-titles denoting women. Two existing approaches to the problem are reviewed: 1) feminine titles are generally used when such variants exist in the same speech style *versus* 2) there is a tendency to use more masculine forms.

A pilot study, based on questionnaires and conducted among 19 émigrés to Canada, revealed that in noun-titles younger people used significantly more masculine gender, and that those who previously lived in western areas of the former USSR used more masculine gender than those who lived in Russia proper. In modifiers, participants with a post-secondary education used more masculine than those with only high school education.

The main research was based on the data obtained from questionnaires, containing sentences in neutral and colloquial style, filled out in writing by 481 participants from

5 locations chosen for typological reasons: Minsk (Belarus), Moscow (European Russia), Chisinau (Moldova), Edmonton (Canada) and Krasnoyarsk (Eastern Siberia).

The data were tested for significance in variation, and for response coincidence (multivariate *t*-tests, factor analysis, and cluster analysis).

The results of the experiment indicated that social parameters, such as the area of the longest residence in the former Soviet Union, age, level of education, social status, place of residence at the age of 3 to 10 years, and parents' education significantly influence the choice of gender.

Analysis of corpus material revealed that the position of the reference to the gender, the presence of a preterit feminine verb in a sentence (which tested the gender distinction of noun-titles and modifiers), declinable specifiers to noun-titles, and double (versus single) reference to feminine gender, all significantly influenced gender differentiation.

Multiple comparisons of individual items as related to social factors revealed that if significant differences were found in individual items they were generally consistent with the overall trend.

Cluster analysis allowed establishing proximities between individual items, and confirmed, similarly to factor analysis, that there is no overall trend in gender differentiation in the three categories reviewed in the study, i.e., nouns, modifiers and verbs.

The research indicated that such factors, as stylistic register, age, education, social status and parents' education, play the most important role in gender differentiation of referential terms.

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The undersigned certify that they have read, and recommended to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled *Gender Differentiation in Personal and Professional Titles of Women in Modern Russian* submitted by Yuri Novikov in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in Slavic Linguistics.

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Chapter 1. INTRODUCTION

1.1. Language and culture

It has been noted (see below) that there should be some kind of relationship between words, syntax, and language as a whole, and the ways speakers experience the world and behave in it. In this kind of research culture is not understood as appreciation of arts. It is a sense of whatever a person must know to function in a particular society. It is like the "know-how" to get through daily living.

Four approaches can be distinguished in connection with this:

1) The structure of language determines the way speakers view the world, or in a weaker version, the structure of language does not really determine the world view, but is extremely influential,

2) The culture of a people finds its reflection in the language. People value certain things more than others, or do them differently. In this case culture does not determine the structure, but it influences how the language is used.

3) The influence is bi-directional: language and culture influence may influence each other.

4) There is little or no relationship between language and culture.

The proponents of the first approach, such as Sapir, and then Whorf, claimed that people would not be able to understand each other without the knowledge of the language. Sapir (1921 and 1929) singled out the following points: 1) human beings do not live in isolation from one another, 2) language is a medium of expression in the society, 3) people adjust to reality using language, and 4) perception of the real world is unconsciously built upon the language habits.

Whorf (Carroll, 1956) is more deterministic. He claims that the linguistic system (words and grammar) is a "shaper" of ideas, like a guide for mental activity. Ideas differ (more or less) in different languages. People "cut" nature up, organize it into concepts, and codify in patterns of their language. Whorf, however, does not go all the way to claim that the language completely determines the way human beings view the world (different speakers view the world differently as they speak languages with different structures).

Fishman (1960 and 1972) pointed out the following: one language has words for certain things and the other lacks these words. The speaker of the first language will talk easier about those things (like numerous words to describe snow in Inuit). This notion may also be extended to grammar. Grammatical categories help to perceive the world in a certain way or limit perception. Thus, language controls the view of the world. Let us recall in connection to this Whorf's example of somebody smoking next to a gas tank full of gasoline vapor and considering it safe because he had been told that the tank was *empty*.

In addition, it is interesting to review the development of the concept of Standard Average European (Carroll, 1956), which was designed to have certain structural features shared by its constituent languages as opposed to, for example, the Indian language Hopi. While Hopi concentrates primarily on the aspects of process and orientation, SAE is directed to time and space. Thus, SAE has fixed segments, while in Hopi the reality is an on-going set of processes. These examples, according to some authors like Fishman, push us towards the conclusion that language determines how speakers perceive and organize the world.

However, experimental testing gives only a partial support to this theory (Lucy, 1992). It seems that we deal not with the different perceptions of the world, but with the reference of certain characteristics to one sub-set in one language and to a different sub-set in another language. In both cases speakers are still aware of all characteristics of a concept or thing, but opt to refer not to all of them.

Boas (1911), in his study of typology of languages, postulates that there is no mandatory connection of language and culture, or language and race. People from different cultures may speak languages of the same structure (i.e., Hungarians and

Finns), or vice versa (Germans and Hungarians). Lack of description of certain ideas or things because of the lack of resources in different languages can be viewed only as partially valid. All languages potentially possess resources to express anything. For example, the Basque language, if necessary, may develop terminology for nuclear sciences.

It is interesting, in this connection, to investigate systems of kinship forms in various languages. Some languages have richer systems, but all languages make use of the same factors as sex, age, generation, blood relation, and marriage. In Russian, with changes in social conditions we observe change in the system of kinship terms. For example, "*шурин*" turns into "*брат жены*" ('wife's brother'). The description is used in this case instead of one word. Other terms completely disappear (e.g., *ятровь*, 'husband's brother's wife'), still others change the meaning ("*свояк*" from 'wife's sister's husband' to any male relative by marriage).

Taxonomy (i.e., classification or categorization) is viewed differently by those who study language using scientific methods and those who do so in a way that makes sense to them from their everyday experiences. The latter is called "folk taxonomy". In most of the cases they deal with flora and fauna, but folk taxonomies can also extend to other things. Analysis of such folk taxonomies helps to organize data in ways which would show how speakers use the language to reflect their world. Comparison of folk taxonomies shows that there is always some kind of system in them, and differences indicate that language and culture are related.

Berlin and Kay (1969) investigated the connection of color terms with culture and language. The color spectrum is a continuum, which we divide and to which we assign names. In different languages certain shades of colors are defined differently, which often makes translation difficult. On the basis of their research, Berlin and Kay state that:
1) all languages use basic color terms in a single word, like "blue" (and not a combination words and not a subdivision for the basic color (scarlet for red),

2) such basic colors must have general use, i. e., denote various things without restrictions,

3) basic color terms are never restricted to use by a specific sub-set of speakers (like, for example, designers).

Studying color terms in various languages, Berlin and Kay revealed certain patterns. If a language distinguishes only two basic color terms, then it is always color terms for white and black; if a language distinguishes one more term, then it is always red; and after that progressively yellow and green (they can also come in a reverse order), blue and brown, and finally shades of colors (gray, etc.), and combinations of colors or subdivisions (e. g., grayish-blue, or scarlet). The authors connected the development of systems for color terms to the level of culture and technology, and found out that more advanced societies use more color terms. The existence of order in the development of the system for color terms shows that perception is the same in all humans. With progress of a society it becomes necessary to differentiate more colors, and in all languages it is done in a similar systematic way. More recent research (Kay, Berlin, Maffi and Merrifield, 1997) reveals that two-term systems contain, not terms for dark and light shades regardless of hue (as Berlin and Kay initially predicted), but rather one term covering white plus "warm" colors (red and yellow) versus one of black plus "cool" colors (green and blue). These categories tend to be focused not only in white and black, but sometimes in red or yellow on one hand, and on green or blue on the other hand. Thus, basic color categories were divided into three types. The first type represents six primary colors: black, white, red, yellow, green and blue. The second type consists of "fuzzy" unions of the primary (fundamental) colors, which include categories of two-term system ("white/warm" and "black/cool") and unions of pairs of the six primary colors. Third type was called "derived" categories, in which colors were defined as fuzzy intersections of the fundamental colors, or mixtures of the fundamental colors (e.g., orange as mixture of red and yellow). Nevertheless, the main idea, i.e., that a language adds basic color terms in a constrained order, which is interpreted as an evolutionary sequence, remains unchanged. Maffi & Hardin (1997:

347) note that, despite criticism, Berlin and Kay's theory remains viable and that the "basic tenets have stood the test of time".

Some authors (e.g., Dittmar, 1976; Bernstein, 1971-5) suggest that both language and culture influence each other. According to them, for instance, a child growing up in certain linguistic environment and culture learns the language of that environment and that culture, and then later on as an adult transfers that learning to the next generation. There is a direct and reciprocal relationship between a certain type of social structure and the way people use language in that social structure.

Thus, we may postulate that all languages have the means which allow any speakers to say anything that they want to say in that language. Some languages, like Russian, developed these means in a vast variety of ways, and other languages, in certain circumstances, are capable of similar development. The Whorfian hypothesis, however, still remains not completely unproved: although, as it appears, in any language a speaker can express anything using some degree of circumlocution. However, in some languages (more than in others) certain concepts may be easier to express.

1.2. Variation

It is commonly accepted that a native speaker of a language has a particular knowledge of his language. It allows him to understand and produce utterances, which he may have never heard before, in this language. This represents the concept of competence. Competence causes us to reject some word combinations, like "A watched John movie", as a sentence, or it tells us that the sentence "Time flies" is ambiguous. Competence includes speakers' intuitions about the language (phonological formation, semantics, morphological properties, syntactic arrangement, and pragmatic and discourse properties). Performance is related to competence. On its basis speakers can produce language structures. In actual speech these structures (sentences) often have interruptions, incompleteness, slips, etc. Chomsky (1965) considers that the correct approach is not to describe such utterances, but to describe the underlying structure (i.e., competence). In this case variation is disregarded, and attention is focused on models which stress unvarying systems and regularity. This approach aims at describing speech of one 'ideal speaker' and disregards variation in speech. Thus, it is argued that linguists must distinguish between what is important and what is unimportant. The important factors are defined then as language universals. In this case competence becomes quite an abstract notion.

However, one may notice that in everyday life there is a great deal of variation in the language spoken by people. To express thoughts speakers use many different possibilities. In fact, not a single person speaks the same all the time. Thus, we are facing a paradox. Many linguists would like to view the language as a homogeneous entity with speakers using one style consistently. Then it would be possible to make strong generalizations. In reality, however, speech contains a considerable amount of internal variation, and there are no single-style speakers.

Since language has variation, we may say that it should not be an abstract object for research. Variation must be included into the linguistic system. We need to study how people *use* the language. On the other hand, we have to realize that variation is not anarchy. It has limits, and speakers have the knowledge of these limits, i.e., existing norms.

In addition, variation is connected to social factors. Wardhaugh (1998) postulated that language study has to be an empirical science, based on data from various sources (documents, interviews, questionnaires, observations, etc.). The described events must be naturally occurring. The data obtained through such methods have to be analyzed statistically. Then we can make conclusions about typical features. There are some important principles involved here, which were outlined by Bell (1976). The more we study the language, the more we can find about it (*the culminative principle*). There is no clear separation between synchronic and diachronic concepts. New data can be used to interpret or confirm old findings (*the convergence principle*). In order to collect information about a language variety, it is worthwhile to ask subjects direct questions about the variety, and this may make them shift from the standard. However, in a study, the more speakers are aware of what they say, the more 'formal' they become. Vernacular is important for conducting studies since it is mostly irregular in its structure. On the other hand, it is quite difficult to obtain real vernacular in a linguistic study involving observations.

Wardhaugh (1998) also mentions that the study of a language has to include the following aspects: regional and social dialects, code diglossia, code switching, definition of speech community, concept of language change, and issues of language and culture. Languages are as complex as societies and cultures, and these two notions are related. By all means, variation may be regarded as an inherent property of language.

In contrast to Chomsky, Hymes (1984) and Gumperz (1984) propose to review *communicative competence* rather than *linguistic competence*. However, in this case, the amount of data, categories and concepts becomes large, and they require organization to form a comprehensive theory. In this connection, quantification becomes quite important. It tells us what we can expect in the groups of people and what trends are developing depending on time, space, gender, social status, age, etc.

If we investigate the functions of language we can see connections to its use for many purposes. The study of specific linguistic items is important as well as their relation to social factors. The study of how the language works, or *must* work, will help to reveal universal facts and reasons for change.

Linguistic study has to be multi-dimensional. The scientific approach should include not just the study of theoretical issues, but a study of data. In terms of the scientific method, the sociolinguistic approach of Wardhaugh, which requires formulation of a theory, setting up of an experiment, collection of data and its analysis, confirming or rejecting the hypothesis on the basis of analysis of data, seems to be more acceptable than Chomsky's highly abstract approach.

1.3. Language and change

Early neo-grammarians, and later de Saussure and Bloomfield, claimed that the change in a language cannot be observed itself, but only through consequences which make some differences in the structure of a language. These linguists considered that variation was of little importance. In time, distinction between sounds may be lost (e. g. English *meat* and *meet*) or might emerge (e.g., English *house* with /s/ as a noun, and /z/ as a verb), i.e., we may observe phonemic coalescence or phonemic split. Variation in this case can be only allophonic or free. Thus, internal change is observed through consequences. Such a change is also possible in morphology or syntax. Another type of change is external change. It is most obviously manifested in borrowings. They can become quite 'marked', like combination of *-schl-* from German. In addition, borrowed words are often 'exotic' things, and quite often they are scientific terms.

The neo-grammarian point of view also regards relationships of languages, or varieties, as the ones having sharp differences. They postulate that at one time one language, or variety, or even a linguistic unit, splits or coalesces. Members of the society are not really aware of these changes, and the change happens in all lexical units at the same time. The society in this approach is regarded as a homogeneous entity.

Another approach predicts that the change happens in a "wave" form, with gradual transition. Various changes in the language interact with each other. According to this approach, members of the society perceive changes in the language. Even more, certain social classes push forward these changes, and this is done with a definite purpose. This approach presupposes that the change takes place differently in different words. Variation in this case becomes an important factor. Thus, contrary to the neo-grammarians' concentration on consequences of change, especially internal, diffusionists claim that changes can be traced in their progress as diffusion through sets of similar linguistic items. Change, and also variation, then is not a random fluctuation. It is obvious then that the time period involved becomes an important factor. In connection with this, two methodological approaches can be used: one may survey the same group of subjects over an extended period of time to see to what extent these subjects maintain the change, or one may compare one's own survey with previous research. Labov's study (1966,1972, 1980) of phonetic developments is particularly characteristic for this approach.

Bright (1960) put forward a hypothesis that 'conscious' linguistic change originates in higher social strata, and 'unconscious' change is natural in all strata where the literacy factor does not interfere. In other words, change is initiated in higher classes and is carried through at lower levels. However, such an approach seems to be oversimplification. Criticizing this approach, Labov (1981, 1994) points to the importance of proper data collection with age grading and the use of various sources, and also insists on relationship of diachronic and synchronic aspects ("dynamic dimension"). Labov notes that the past helps to explain the present and vice versa. He views the mechanism of change, talking mostly of sound changes, as a set of stages "from below", i.e., below conscious awareness, and changes "from above", i.e., brought about consciously. Changes are not based on the principle of least resistance and do not appear randomly anywhere in the social spectrum, but have a tendency to arise in the central part of the social spectrum.

Bailey (1973) suggests that in order to explain variation one must review a *dynamic paradigm* in contrast to static one. He predicts that the change diffuses through vocabulary in certain patterns (lexical diffusion), i.e., a sound change spreads gradually through words in which the change applies. In some words the change will start initially and then other words will join in until the change is completed. It is obvious that "wave" and "diffusion" theories are similar. The former explains how people are affected by change while the latter reveals how a change spreads though a set of words. In addition, it is interesting to mention Labov's observation that certain changes follow predictions of the neo-grammarian approach while some others seem to develop according to the theory of lexical diffusion. Thus, a hierarchy of abstractions becomes prominently important, and it determines the nature of transition from one stage of a change to another.

1.4. Aim of the dissertation

Thus, we may agree that linguistic change is an interaction of variation and social pressures, and the aim of this dissertation is to demonstrate one sphere where this is true. The category of referential terms for women represents an interesting example of this interaction. The issue of grammatical gender of nouns denoting the referential terms and its interaction with the actual gender of referents acquires primary importance here. Trends may vary in different languages. In English, for example, which has no inherent grammatical gender in nouns, certain social factors such as the rise of the feminist movement and the strive for "political correctness" have led to the development of gender-neutral expressions (e.g., *police officer*, or *waiter* instead of *waitress*). The number of such instances in English is small, however. The situation in Russian is much more complicated. The development of gender differentiation was associated with drastic changes in the Russian society, and in the status of women in particular, in the early 20th century, and especially after the Revolution of 1917.

The fact that nouns in Russian have inherent grammatical gender creates certain constraints in the use of professional and personal terms for women. While approximately a quarter of all referential terms have corresponding masculine and feminine terms, the speakers do not always use feminine forms when they refer to women. This also leads to some difficulties in the coordination of masculine nouns, referring to women, with modifiers (adjectives, participles and pronouns) and preterit verbs. The speakers have a choice of grammatical coordination versus coordination by meaning in this case. Various attempts to provide an explanation to this phenomenon have failed to create a comprehensive picture. We believe that our investigation of the influence of social parameters of speakers, as well as of some structural properties of the sentences in which the referential terms are used, will display interesting results.

Chapter 2 of the dissertation will give a review of previous research on gender differentiation in referential titles of women, including aspects of morphological formation and influence of sociolinguistic factors. Chapter 3 contains the results of a pilot study, which was aimed at testing the influence of various social factors on the choice of gender. Chapter 4 presents an account of the main experiment, which was conducted on the basis of the findings of the pilot study. Chapter 5 contains conclusions regarding the research and suggestions for the future study.

Chapter 2. REVIEW OF PREVIOUS RESEARCH ON THE SUBJECT

2.1. Feminine occupational and personal titles in Russian

Social factors influenced the process of formation of feminine titles, perhaps, more than any other morphological categories of the Russian language. Up to late 19th century, because of social inequality, women could not participate in many types of activities in which men were involved. Consequently, only a few occupations could be carried out equally by both men and women, and in this case a separate feminine title always existed (e.g., *акушер-акушерка* 'obstetrician'). Comrie and Stone (1996: 231) note that in some instances when both masculine and feminine nouns existed, the masculine name often had a wider range of meanings or denoted a more prestigious occupation (cf. *эконом* 'economical person; house keeper' vs. *экономка* 'housekeeper' only). However, Panov (1968a: 191) notes that even then some instances of the use of masculine titles in reference to women were reported (*... мать делается учителем и наставником своих детей...* '...the mother becomes a teacher (masc.) and a guide (masc.) for her children...') although parallel feminine titles already exsited. Thus, this allows us to postulate that language laws did not prevent formation of a "gender generalized" meaning for masculine nouns. However, social factors (i.e., inequality of men and women), according to Panov, prevented this trend from developing further.

In the late 19th century, and especially in the early 20th century, the involvement of women in social, production and cultural activities increases dramatically. Consequently, the 'old' trend of giving a separate feminine title to women spread quite intensively. However, according to Panov (1968a: 193), the same changes in the society which promoted development of the 'old' trend created a new tendency of using masculine titles to refer not only to men, but also to women. It is notable that this new trend appeared in the speech of the progressive intelligentsia.

The process of switching to the masculine gender was carried out more actively in the category of plurals. Thus, according to Panov, by the early 20th century plural masculine titles already denoted not just male persons. This process was facilitated by the fact that it was more of a semantic issue than a grammatical one, since it did not require coordination of plural nouns with modifiers and preterit verbs.

After the October Revolution of 1917, the status of women changed even more radically (Shapiro, 1975; Gorsuchem, 1996). Their active participation in social, political, governmental, cultural, and production spheres led to further changes in the designation of professional titles relating to women. The 'old' trend, according to Panov, acquired a new impulse. The 'new' tendency, on the other hand, had to establish itself again, because the class structure of the society changed significantly: a considerable part of the intelligentsia emigrated from the country. However, from the late 20s the use of masculine noun-titles in reference to women began to increase. We need to note here that the process was not uniform: noun-titles differ in morphological and semantic characteristics, and thus tendencies of gender differentiation in them could be different. Some masculine noun-titles are used along with the feminine noun-titles, and gradually replace them in speech (Panov, 1968a: 197); others failed to develop widely used parallel feminine forms. The initial prevalence of feminine titles can also be explained by the fact that when women were appointed to new positions and acquired new professions this evoked admiration and surprise. Thus there was an inclination to call women differently from the men. However, when this became a common phenomenon, the referential term was generalized using the masculine gender.

The new tendency to use masculine nouns in gender-generalized meaning spread actively in subsequent years. The new trend was reflected not so much in the decrease of rate in formation of parallel feminine titles, but rather in the decrease of their use in speech. Panov (1968a: 202) states that "in the present social conditions there are no reasons to systematically emphasize the correlation of women's and men's work; thus the necessity of constant opposition of corresponding forms for nouns in masculine and feminine gender disappears".[1] The proportion of feminine titles used in speech decreases in relative terms (as compared to the increase of the number of womenprofessionals) and in absolute terms, because many existing words go out of use or acquire lower stylistic status and limit the sphere of their use. The intensity of replacing feminine titles with masculine varies depending on semantic and morphological properties of individual words, as mentioned above. The higher prestige or qualification of a particular term, the faster the masculine term "pushes aside" the feminine form (cf. *директор-директорша* 'director', the latter now hardly being used in a stylistically neutral context). Words used with more concrete meaning differentiate gender more often than words with abstract meaning (cf. *Васильева – персональный пенсионер* 'Vasilyeva is a distinguished pensioner'). Derivational features also influence gender differentiation. The use of feminine titles may be correlated with productivity of suffixes with which they are formed. Thus, feminine titles formed with the suffix *–ша*, which is less productive in modern times, are being replaced with masculine nouns in the neutral style.

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[1] My translations from Russian here and below, Y. N.

It is interesting to note that Protčenko (1975: 282) opposes Panov's point of view. He states, referring directly to the quotation from Panov cited above, that the equality of men and women *is* reflected by existing parallel gender forms: "the social aspect must not acquire a shade of vulgarization (as if the tendency to call a woman by a word in the masculine gender *were* a reflection of women's equality in the language)." Criticizing Panov and other authors, he notes that reference to the decreasing use of corresponding feminine titles is made by them in absolute terms, while there should be a differentiated approach. This approach should take into consideration the functional and semantic features of masculine and feminine forms, and stylistic the differences associated with them, which are extremely diverse. Protčenko claims that while in scientific, official and business genres gender-unmarked forms may prevail, in colloquial, belles-lettres and neutral genres a "prevailing and considerably wide use" of corresponding feminine titles is observed (1975: 280). Protčenko prefers to view the phenomenon of gender differentiation in occupational titles not as opposition and replacement of feminine forms by the masculine, but as a phenomenon of mutual influence of the corresponding gender forms. He urges us to take into account the context and style in each particular case. This author considers that corresponding feminine and masculine occupational titles developed subtle semantic and stylistic differences, and this manifests an enrichment of the language, while preference of one form over the other may lead to an "artificial degradation" of speech.

Let us now review the realization of gender differentiation in occupational titles in Modern Russian. There are three basic means of forming feminine professional titles. They are: 1) by morphological means, the addition of certain suffixes (*тракторист-трактористка* 'tractor-driver'[2]); 2) by substantivizing adjectives and participles (*заведующий-заведующая* 'manager'); or 3) by compounding (*женщина-врач* 'woman-physician'). In addition, there are at least two ways in which nouns having only a masculine form (or when there is no corresponding feminine form in the same stylistic register) can be used in reference to female subjects: 1) agreement by form (*педагог сказал* 'teacher said (masc.)', *участковый врач* 'district (masc.) physician'), although a female person is meant; or 2) agreement by meaning (*педагог сказала* 'teacher said' (fem.), *участковая врач* 'district (fem.) physician').

Suffixation and substantivization are relatively predictable processes. Compounding, while semantically unambiguous, is often perceived as "too bulky". The remaining processes, which deal with the coordination of forms that present some gender-related conflict, will be reviewed and briefly discussed. Strict grammatical agreement is attractive because it creates no violation of grammar; a masculine noun takes a verb, or a modifier, in the same gender. However, these constructions sound quite formal, and in many instances it is unclear whether it is a man or woman who is referred to by the noun (*Хирург сделал трудную операцию*. 'The surgeon performed a difficult operation.'). Semantic agreement helps to avoid ambiguity, but creates constraints due to the violation of grammatical agreement. Of the last three types, according to Protčenko (1985: 287), agreement by meaning is used most often in preterit verbs, agreement by form is rare, and compounding is more widespread than strict grammatical agreement. We should also mention here the changing attitudes of normative works. While the 1970 Academy Grammar treated agreement by meaning in verbs as highly colloquial and similar adjectival agreement as ungrammatical, the later 1982 Academy grammar recognizes the former as the norm and the latter as colloquial.

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[2] All English translations denote female persons unless marked otherwise.

2.2. Morphology

There are various conditions and impulses which on different occasions promote or restrain tendencies to use Russian masculine nouns for feminine titles or professions. Ušakov's dictionary (1935) contains 7,740 personal title nouns for both men and women. Masculine nouns constitute 5,716 of the total number (73.8%), and feminine nouns, the remaining 2,024 (i.e., 26.2%). 1,634 nouns have corresponding masculine and feminine forms (*парашютист-парашютистка* 'sky-diver'). After excluding the 340 nouns occurring only in the feminine (*горничная* 'chambermaid'), and adding 240 new nouns which obviously appeared after the publication of the Ušakov's dictionary, Protčenko (1985: 285) concludes that feminized versions of masculine profession nouns constitute one quarter of all nouns for professional titles. According to Graudina's (1976) data corresponding feminine titles constitute 30.68% of all existing professional terms. We should note here, however, that most likely not all feminine titles are included as separate entries in dictionaries. We may expect that if authors do not see semantic peculiarities in such feminine titles, but view them merely as feminine counterparts, i.e., grammatical variants, to masculine titles, they may be reluctant to include them into the corpus material. Nevertheless, masculine gender nouns far outnumber those of feminine gender. Perhaps this predominance accounts for the phenomenon whereby grammatically masculine nouns are often used to denote people in a general sense, even when a corresponding gender-differentiating term exists: *Она работает программистом* 'She works as a programmer'. In addition to profession nouns that have both masculine and feminine variants, there is a considerable number of nouns which have only a masculine form; even when they refer to women (*посол* 'ambassador', *хирург* 'surgeon'), where no feminine forms have been observed.

As mentioned before, changes in the structure of society and various economic and cultural developments at the beginning of the century led to the emergence of new words in the lexicon. While previously not widespread, it became common to add a feminizing suffix to profession nouns of masculine gender when referring to women employed in the field. However, the process of formation of feminine titles was, and will remain, gradual, according to Protčenko (1964). Its progression in various semantic groups of nouns varied (cf. *летчик-летчица* 'pilot', while there is no corresponding feminine title for *доцент* 'assistant professor').

The following morphological means are currently productive in the derivation of feminine nouns: 1) suffixation of non-suffixed masculine nouns (*пионер-пионерка* 'member of the Young Pioneer League'); 2) suffixation of suffixed masculine nouns (*писатель-писательница* 'writer'); 3) substitution of a masculine suffix by a feminine one (*ударник-ударница* 'shock worker'). The last two approaches to word-formation are used more often than the first.

According to Protčenko, in terms of productivity of suffixes, 89% of nouns having corresponding masculine and feminine variants are formed with the help of the two suffixes *-ка* and *-ица*. Less productive are the suffixes *-ша* and *-иха*. The following suffixes are no longer productive in Russian: *-уха, -я, -ыня, -иса, -есса*. Some suffixes, like *-ша* and *-иха*, are stylistically colored in Modern Russian. The semantics of these latter suffixes changed in the course of the 20th century. Previously, these suffixes were used to denote the wives of men holding the given position (*генеральша* 'general's wife'). Later these suffixes acquired the meaning of a woman's affiliation to a certain profession. In most of the cases in Contemporary Russian, however, nouns with such suffixes are mainly restricted to the colloquial style, while in the official context a masculine noun will be used (cf. *контролер* and *контролерша* 'inspector'). While analyzing the decreasing productivity of some suffixes and increasing capabilities of others, it is essential to consider the stylistic and expressive features of some suffixes, existing word-formation patterns, and properties of word bases to which suffixes are attached.

Another way to increase the number of feminine variants of masculine forms is by the substantivization of adjectives and participles. The process of substantivization of various adjectives and participles is not uniform; if some of them completely entered the category of nouns - some of them not differentiated by gender - (*портной* 'tailor', *дневальный* 'soldier on duty'), others are still used both as nouns and adjectives (*рабочая* 'worker' and 'work' (adj.), *ученая* 'scientist' and 'scientific'). In cases when such substantivized adjectives or participles have a dependent word, the masculine form is generally used more often, according to Protčenko (*районный уполномоченный* 'representative from the region center').

2.3. Sociolingistic factors

The fact that the number of feminine forms increased markedly during the 20th century, but did not exceed more than one quarter of all titles, was interpreted differently by Soviet linguists.

On one hand, Protčenko (1985) and some other authors (see below) claim that the existence of parallel feminine titles is determined by socio-economic conditions in the society as well as by the peculiarities of the morphological system of the language. Words appear when there is a necessity for them. Thus, prior to the Second World War, titles like *сталеварка* 'steel-maker', *зенитчица* 'anti-aircraft gunner', *горновая* 'furnace-worker', did not exist. They appeared only when women began to be employed in what were, traditionally, male-dominated occupations. The general conclusion here is that the process of creating feminine forms for existing masculine nouns is a definite trend in the Russian language. The tendency is to use feminine nouns in titles when such forms exist and they do not have considerable semantic and stylistic difference from masculine referential terms.

Martynyuk (1990) adheres to the same point of view. This author reviewed over 5,000 instances of professional titles referring to women from the Soviet press. The statistical data provided by this author are of considerable interest (1990: 107). In the singular, 60.1% of nouns were found in masculine. Of these 50.8% had no feminine alternatives in the same stylistic register, while 9.3% allowed feminine derivatives. 39.9% of nouns occurred in the feminine. 37.7% of these nouns had corresponding masculine forms, while 2.2% did not have masculine variants. According to Martynyuk, the majority of generalized masculine nouns are of foreign origin and name prestigious occupations (*адвокат* 'lawyer', *архитектор* 'architect'). The existing feminine forms of the profession nouns which were nevertheless used in the masculine (9.3 %) are all relatively new, having been formed after the 1917 Revolution using productive word-building models (*учитель-учительница* 'teacher', *писатель-писательница* 'writer'). Martynyuk considers these corresponding forms practically interchangeable in most syntactic contexts, and claims that female-specific suffixes generally do not bring about negative stylistic coloring. Some speakers, however, especially intellectuals (and we witnessed the same attitude in the course of our study), regard masculine forms as more formal and more prestigious. At the same time, according to Martynyuk, the female-specific terms are widely used in the press in contexts which exclude a "downgrading interpretation", i.e., lowering status of women. Titles of less prestigious occupations are never found in the masculine (*няня* 'baby-sitter', *машинистка* 'typist'). Their occurrence is considerably lower (2.2%) as compared to solely masculine terms (50.8%).

Thus, Martynyuk (1990: 108) concludes that there are no grounds to speak of a triumph of "sex-neutral" use of masculine forms, and that "there exists a system of parallel terms for most of the trades and professions" (with the exception of prestigious ones where foreign origin serves as the obstacle to the formation of adequate feminine equivalents). Female derivatives are rapidly formed in the professional lexicon, and the use of masculine terms instead of them is only occasional and often stylistically governed. However, a tendency to use masculine professional titles when referring to women has been noted.

Proponents of the above interpretation also claim that increasing gender differentiation in corresponding occupational titles is observed not only in the Russian language, but also Ukrainian, Belorusian, Czech, Bulgarian and Polish.

On the other hand, some authors have opposed the viewpoint discussed above. Panov (1968a) and Mučnik (1963) claim that the tendency to use "unmarked terms" in reference to men and women triumphed over the tendency to use separate male and female terms, and that even traditional female titles are being replaced by sex-neutral ones. Sudavičene *et al.* (1984: 239) states: "In the category of nouns the necessity to use masculine nouns to denote women (due to broad involvement of women into various areas of activities) has significantly increased".

According to Janko-Trinickaja (1968), inequality between the sexes in pre-socialist society prevented masculine nouns from developing a common meaning for both genders, and as a result of this, the tendency to use feminine nouns in women's titles and professions of women emerged. This trend prevailed in the 19th century, and continued in the 1920's, though less intensively. It continues to be observed, though to a lesser degree. Comrie and Stone (1996: 273) correlate the tendency toward using masculine nouns in titles with the influence of the intelligentsia around the turn of the century: "... the tendency initiated by them among themselves has become much more widespread..." The competition between the two trends is ongoing, with a significant balance in favor of the new trend, according to these authors. The overall increase of the use of masculine nouns in reference to women, and the variations of this usage between older and younger generations confirms this opinion. The prevailing use of masculine nouns enriches the language, according to Janko-Trinickaja. It provides a choice whereby one can use masculine nouns to convey generalized meaning, or the corresponding feminine forms, which more concretely refer to a woman by indicating her sex.

When reviewing the importance of social factors it is worthwhile to mention the results of Panov's (1968a) sociolinguistic study. The author used a questionnaire which required participants to state the titles of their mothers' professions. The data of proportional use of masculine gender varied considerably for different titles. However, in the majority of items the use of masculine gender prevailed. In addition, Panov found out that more feminine forms were observed in the answers of the older generation. He also acknowledges the importance of style, stating that the use of masculine noun-titles is more characteristic of the neutral style, and the business genre, while the use of feminine nouns, including those with various expressive suffixes, characterizes mostly colloquial speech when it is necessary to pay more attention to the gender of an interlocutor. Protčenko (1975: 280) criticizes Panov's results, and claims that they could not be considered truly valid because the context (formal, business genre) of Panov's questionnaire elicited the use of the masculine gender in participants.

The most extensive study of how social factors influence the choice of gender was conducted by Krysin. The author reviews four groups of noun-titles (Krysin 1974: 278): 1a) nouns representing personal titles (5 items), whose corresponding feminine forms are easily derived from the masculine titles with the help of non-borrowed suffixes, and do not differ stylistically (e.g., *неудачник-неудачница* 'looser, unsuccessful person'); 1b) nouns representing professional titles (7 items), whose corresponding feminine forms do not differ stylistically from masculine nouns, but the derivation with the help of non-borrowed suffixes is hindered (e.g., *путеец-путейка,* 'railroad worker'); 2a) nouns representing professional titles (7 items), which contain borrowed suffixes, and which feminine forms have lower stylistic status than masculine counterparts (e.g., *диктор-дикторша* 'radio/TV announcer'), and 2b) nouns representing personal titles (6 items), which contain borrowed suffixes, and which feminine derivatives have lower stylistic status than masculine counterparts (e.g., *инициатор-инициаторша* 'initiatiator'). Participants were requested to fill in the blanks in sentences like (Groups 1a and 1b): *Он редкостный каверзник, и она тоже* ... ('He is an extraordinary schemer, and she is a … too'), and answer (Groups

2a and 2b) how they would refer to women, using particular titles, in the context of a friendly conversation, and in official speech.

The results of the study revealed a considerable prevalence of feminine gender nouns in Group 1a. At the same time, the factor of age in this particular group of nouns was not proved to be statistically significant, although the averages of the use of masculine decreased in the older generations. The factor of education (participants with higher education compared to those with high school education) was not found to be statistically significant either, however the factor of social status (categories of philological, technical and humanitarian intelligentsia, white-collar workers, blue-collar workers, and students compared) was significant in 3 items out 5, with subjects of higher social status (i.e., intelligentsia vs. white-collar and blue collar workers) using more masculine gender. The territorial factor revealed that participants from Ukraine used significantly more masculine gender than participants from Russia proper (Moscow, Leningrad, Southern Russia, Central European Russia, and Northern Russia), while participants from other Soviet republics used more masculine forms than participants from Northern, Central European Russia, and Leningrad.

In Group 1b, all items, except one: *прыгун–прыгунья* 'jumper', were used more in the masculine. The factor of age (four groups defined as follows: 70 and older, 50 to 69, 30 to 49, and younger than 30) influenced the use masculine in various items differently. In the majority of items the use of masculine gender increased form older generations to younger generation. In nouns *путеец-путейка* 'railroad worker', and *конькобежец-конькобежка* 'skater', the trend was reversed, however. The factor of education displayed a higher level of means in the use of the masculine gender for participants with higher education for all items (except *исполкомовец/-ка* 'Executive Committee worker'). The factor of social status revealed varying trends in the tested items, however in the majority of them the intelligentsia used more masculine forms than white-collar and blue-collar workers. The territorial factor, similarly to Group 1a, indicated that participants from Ukraine used more masculine gender on the average than participants form Russia proper and other Soviet republics.

In Group 2a, in contrast with groups 1a and 1b, the feminine gender prevailed in the majority of items in both neutral and colloquial contexts. Krysin also notes that prevalence of women in certain professions is reflected in a more frequent use of the feminine gender (cf. *лифтер/-ша* 'elevator operator', *билетер/-ша* 'ticket seller', and *парикмахер/-ша* 'hairdresser' are examples of professions employing almost exclusively women in Russia). The influence of the age factor revealed that unmarked use of the masculine gender in neutral style was generally more pronounced in the speech of the participants of the age of 25 years, which contrasted with the older generation and participants of 17-23 years of age, although, tendencies varied in different items. Similarly to group 1b, the factor of education was important in that for the majority of items participants with higher education had a higher pecentage of the use of masculine. In terms of social status, in both neutral and colloqual style, minimal use of feminine gender was characteristic of technical intelligentsia and white-collar workers, and maximal among students and philological intelligentsia. The territorial factor, despite variation in items, confirmed that participants from Ukraine used more masculine gender than participants from Russia proper and other republics.

In Group 2b the masculine gender prevailed in the responses of participants in the neutral style, while the femnine gender was used almost exclusively in colloquial style. In terms of the age factor, a tendency similar to nouns of Group 2a is observed: the use of masculine increases from older to younger generation of the age 30 to 49, but then decreases in younger participants. In terms of education level, considerable differences between two groups (higher education and high school education) was observed, with more masculine used by participants with higher education. Statistically significant differences were observed in comparing responses of participants from different social groups: the intelligentsia used more masculine as compared to white-collar and blue-collar workers. The influence of the territorial factor, however, was different from previous sections: more masculine was observed in participants from Moscow and Leningrad, followed by those from Ukraine, other Russian areas, and finally by other republics. Krysin (1974: 295) notes that for this category of nouns the trend to use more masculine forms prevails in "the centers of language norm", while participants from other areas generally prefer masculine forms in the neutral style, but are more "liberal", i.e., allow some feminine forms, in colloquial contexts.

Thus, Krysin formulates conclusions in the following way. First, the more readily the feminine nouns corresponding to masculine ones are formed (with no stylistic difference between parallel forms), the less variation there is with regard to social factors. Conversely, if the formation of feminine nouns is hindered due to morphological, phonological and other aspects, variation in gender forms due to social factors is more significant. Second, variation appears to be dependent on the lexical particularities of words. Third, the use of masculine nouns in reference to women is observed mainly in the social group of the intelligentsia, especially those in technical professions, and in those who reside in major cities. The analysis of gender differentiation of nouns with respect to the age factor gave contradictory results for different lexical items used in the study. Krysin notes that the opinion that the use of masculine nouns increases in the younger generation is confirmed only partially by the data. In individual lexical items, the opposite trend may be observed. Although Krysin gives vivid confirmation that sociolinguistic factors influence the choice of gender, from our point of view, his research has a drawback because he operated mostly with mean values, and very seldom obtained statistically significant differences.

2.4. Use of modifiers in differentiation of gender

When the formation of a feminine correlate is impossible, other means of providing gender differentiation can be employed, for example, modifiers. Nouns for which feminine variants do not exist or not found in the same stylistic register (henceforth to be referred to as unchangeable nouns) can have, dependent on them, three kinds of modifiers: 1) personal, indefinite, possessive, or demonstrative pronouns (*моя/какая-то/та/эта прозаик* 'my/some/this/that (fem.) prose-writer'); 2) adjectives (*новая* *педагог* 'new (fem.) teacher'), 3) participles (*заслуженная мастер* 'distinguished (fem.) foreman'). According to Protčenko (1985:309), pronouns defining masculine nouns used to denote women have to be coordinated by meaning. In other words, the pronouns must reflect the natural gender of the referent (*сама профессор* 'the professor herself'). Adjectives and participles, according to this author, are to be used in the masculine, and violations of coordination are perceived as a breach of grammatical norms (i.e., *участковая врач* 'district (fem.) physician' is unacceptable). This view is shared by Martynyuk (1990: 108) who states that "instances of sex-determined concord can be viewed only as exceptions."

According to the data supplied by Graudina (1976: 100), the coordination of modifiers has the following distribution: 30.95% are analytically coordinated in meaning (*уважаемая товарищ* 'dear (fem.) comrade') versus 69.05% which show strict grammatical coordination (*уважаемый товарищ* 'dear (masc.) comrade' but referring to a woman). It is evident from these data that coordination by meaning occurs less frequently than formal coordination, but is quite possible. Moreover, Graudina considers that this group reveals the tendency "to expand, develop and entrench itself in Contemporary Literary Russian".

Mučnik (1963: 78-82) also noted a tendency towards coordination determined by the natural sex of the referent in verbs and specific modifiers when no feminine equivalents of nouns were possible, although he admitted that this trend was somewhat weaker with adjectives. His study also showed that younger speakers were more likely to use analytical coordination, which allowed this author to conclude that this trend is likely to increase in the course of time.

It is worthwhile to mention here Panov's (1968b) sociolinguistic study of the phenomenon. Participants of the experiment were asked to answer what they would say referring to a woman: *у нас хороший бухгалтер* 'we have a good (masc.) accountant', or *у нас хорошая бухгалтер* 'we have a good (fem.) accountant'. The use of masculine gender in responses prevailed considerably: 69.9% for masculine, 25.0%

for feminine, and 5.1% hesitated to make choice. Let us note that these data are quite consistent with the results reported by Graudina (see above).

Panov (1968b: 39) reviewed the distribution of answers depending on subjects' social group (philological and non-philological intelligentsia, white-collar workers without higher education, blue-collar workers, writers and journalists, and students). The use of masculine in the responses of intelligentsia, writers, and students (87-70%) was considerably higher than in white-collar workers (60.9%) and blue-collar workers (55.0%). The study of the age factor indicated that percentages of the use of masculine differed considerably in the age group of 60 years and older (83.5%) as compared to other age groups, in which differences were insignificant: 69.0% for the age of 50 to 60, 71.2% for the age of 40 to 50, 68.1% for the age 30 to 40, and 66.9% for the age of 30 and younger. Basing himself on these results, Panov (1968:40) states that the necessity to use modifier-noun agreement (*хороший бухгалтер-хорошая бухгалтер* 'good accountant') in the Russian language is significantly lower than for verb-noun agreement (*врач пришел-врач пришла* 'the doctor came'). In many cases feminine gender is already expressed in the predicate, thus the second reference to the gender in the modifier will be a violation of the 'standard' agreement and is not justified by the requirement of the context. On the other hand, speakers may want to unify gender forms of the predicate and the modifier, which act as explanatory items to the noun. Thus, modifier-noun agreement develops under the often conflicting influence of different language factors, which facilitate or hinder its spread.

2.5. Verb-noun coordination in gender-specific constructions

According to Panov (1968a: 194), the use of masculine nouns in reference to women initially, i.e., in the late 19th and early 20th centuries, was observed mostly in positions where they did not have to be coordinated with preterit verbs (part of a nominal predicate, address, objects, or as a subject with the verb in the present tense). Thus, the issue of verb-noun coordination of professional titles was not as important as it became later. Peškovsky (1938: 192), reviewing the situation in the Russian language in the 20s, noted that verb-noun agreement by meaning began to spread at that period of time to avoid ambiguity.

The increased use of masculine nouns in reference to women, and the loss of gender marking in masculine nouns, as Janko-Trinickaja (1976: 123) states, influenced a number of grammatical categories, thereby allowing for the analytical expression of gender in syntactic phrases with verbs, i.e., the use of feminine verb forms with unchangeable masculine nouns. Moiseev (1967) plainly calls the analytical coordination of verbs with masculine nouns used in reference to women "the innovation of the Soviet epoch".

As Comrie and Stone (1996: 243) point out, native speakers feel "a conflict in using a feminine verb form ... with reference to a masculine noun, and in using a masculine adjective or verb to refer to a woman". In other words, there is a genuine conflict between natural gender and grammatical gender. "Wide-spread encroachment" of natural gender agreement, according to these authors, and also according to some Soviet sources (Panov, 1968), is a recent, but widely spread, phenomenon. Graudina's study (1976) of gender differentiation in preterit verbs gives the following distribution: 95.43% for *директор пришла* 'the director arrived (fem.)' vs. 4.57% for *директор пришел* 'the director arrived (masc.)' but referring to a woman.

Martynyuk (1990: 108) agrees that agreement of verbs with unchangeable nouns by meaning is a widespread phenomenon: she claims that "the tendency towards sex-determined concord is ... prominent with verbs, and ... the cases of grammatical coordination can be regarded as an exceptional and occasional phenomenon: the ratio of grammatical concord to sex-determined concord here is 1 to 35".

The most extensive sociolinguistic analysis of the phenomenon was conducted by Panov (1968b). The author investigated responses from a questionnaire for two instances: *врач пришел/-а* 'the physician came' and *управдом выдал/-а* (справку) 'the house manager issued (a confirmation)'. Averages of the use of feminine vs. masculine differed for these items in the following way: 38.6 % masc., 51.7 % fem. and 9.7 % hesitating to make choice for the first item, and 33.0 %, 60.7 % and 6.3 %, respectively, for the second item. Differences in the percentages may be explained, according to Panov, by the fact that the word *управдом* represents a neologism, and allows speakers to use the rules of formal agreement with "more freedom", i.e., deviate from grammatical coordination. Let us also note that percentages of the use of masculine in Panov's data are considerably higher than the data of Graudina and Martynyuk.

Panov (1968b: 28) gives a comparison of responses by various social groups (philological and non-philological intelligentsia, writers and journalists, white-collar workers without higher education, students and blue-collar workers). It is notable that for both items in practically all social groups agreement of gender by meaning prevails over grammatical agreement. The highest use of masculine verbs was found in responses of writers and jounalists: 50.7% for the first item, and 41.6% for the second. Differences of percentages for other social groups were not very high: generally a little more masculine for intelligentsia and students, and less for white and blue-collar workers. The data for the influence of the age factor (*врач пришел* vs. *врач пришла*) revealed that there is a consistent decrease in the percentages of the use of masculine from the older generation to younger (49.8% for the age group of 60 and older, and 37.3% for the age group of 30 and younger). It is interesting to note that participants of the age group of 30 to 40 obtained a lower proportion of the masculine than the youngest participants (36.7%). Panov explains this result by the influence of high school instruction enforcing strict grammatical agreement. This author's general prediction is that agreement by meaning would eventually prevail.

Chapter 3. THE PILOT STUDY

In the preliminary stage of the research it was decided to find out whether social factors influenced gender differentiation in referential terms of women. For this purpose the current patterns of use of feminine nouns by native Russian speakers residing in Canada were analyzed. The study was based on a questionnaire consisting of 55 Russian sentences (Appendix B). Since it was predicted that in the formal style speakers would tend to use the masculine gender more, for the purposes of achieving more variation, it was decided to include sentences containing nouns referring to women both in neutral style (non-bookish, not colored stylistically, items of such kind could be encountered in any context) and colloquial speech style (e.g., *Леонова – большая интузиаст/-ка своего дела* 'Leonova is a great enthusiast of her work' [neutral]; *Ребята! Урока не будет! Математик/-ичка заболела!* 'Guys, the class is canceled! The math teacher is sick!' [colloquial]). Both the neutral and colloquial contexts for the words *учитель-учительница* 'teacher' were given. Forty-eight of the fifty-six words considered had corresponding masculine and feminine forms. Words with no gender pair, of which there were six, were tested for their coordination with specific modifiers (adjectives and pronouns). Five other words were tested for coordination of the predicate in the past tense. All nineteen participants were asked to read aloud the sentences from the questionnaire and to supply the necessary gender endings. The results were recorded in a table. The following personal information was gathered from all informants: gender, date of birth, education, location of longest residence in the former Soviet Union, place of residence between the ages of 3 to 10, social class (upper or lower), place of birth of parents, and social status/class of parents.

3.1. Feminine vs. masculine nouns

Table 1 (Appendix A) displays the averages of the use of masculine in nouns used in the study. The data show considerable variation. Certain words in the original set did not reveal variation of gender in the answers of informants, and these words were excluded from the analysis. These are: *дояр/-ка* 'milkmaid', which appeared only in the feminine in all answers; and *кондуктор/-ша* 'conductor', *медик/-ичка* 'medic', *депутат/-ка* 'deputy', *делегат/-ка* 'delegate', *инвалид/-ка* 'handicapped person', which appeared only in the masculine. The word *инвалид/-ка* can only have a partial correlation to feminine and masculine forms since the feminine variant has a semantic meaning relating both to human beings and to a non-living object ('a small car for handicapped people'). The data showed that the following suffixes were used in forming feminine variants: *-ка, -ица, -иха, -ичка, -ша*, and even *-иса* and *-есса,* which many authors believe are disappearing from use. The analysis indicated that 55% of the total number of nouns considered were used in the feminine form, which is a significantly higher percentage than in Martynyuk's data (39.9%). These nouns, as Krysin noted, are used in the feminine with varying frequency due, probably, to certain semantic characteristics of each lexical item and to the ease with which they form feminine correlates. The word *оппонентка* 'opponent' had an incidence of .05 (i.e., appeared 5% of the time), while words *преподавательница* 'teacher', *комендантша* 'superintendent', *корреспондентка* 'reporter', *граверовщица/граверша* 'engraver' had an incidence of .10-.16. The word *врач* 'physician' has an infrequently used counterpart (*врачиха*) that is found only in colloquial Russian (an incidence of .10 in our study). Among the words which have the highest average incidence of feminine forms are *заведующая* 'manager, head', *красильщица* 'dyer' (.94), *кладовщица* 'storekeeper', *табельщица* 'time-keeper', *воспитательница* 'nursery-school teacher' (.89). It is interesting to note that the word *студентка* 'student' obtained a high average incidence (.84), even in the context of a neutral style where one might expect the use of the masculine form. When substantivized participles such as *заведующий/-ая* 'manager, head' and *уполномоченный/-ая* 'representative' were used in conjunction with certain dependent words the data from the experiment showed the results to be very different from Protčenko 's conclusions (1985: 311), who predicted that the masculine form of the participle predominates in this environment; *заведующая* and *уполномоченная* obtained incidence of .94 and .31 in the experiment reported here.

Data from the questionnaire were analyzed to establish how differences in gender, age, education, area of residence in the former USSR, and social status of the speaker's parents influenced the distribution of feminine and masculine noun forms (Appendix A, Table 2). Other sociological factors from the questionnaire (residence at the age 3 to 10, participants' social status, and origin of parents) were discarded either because there was not enough variation in respondents, or the data were too hard to categorize.

Speaker's gender proved to be an insignificant factor in lexical choices: x^2=.23, $p<.852$, (average in females .56 vs. .54 in males). For the analysis of age influence, the participants were divided into two groups: those 30 years and older, and those under 30. Speaker age, unlike gender, proved to be a significant factor: x^2=4.00, $p<.042$. It appears that the older generation makes more use of feminine nouns of profession than its younger counterpart (average .60 vs. .47). In the area of education level, participants were divided into two groups: those with a post-secondary education, and those with no more than a high school education. The difference in this correlation was insignificant: x^2=.516, $p<.47$ (average .59 in high school vs. .53 in post-secondary graduates). To analyze the influence of place of longest residence in the former USSR, the participants were divided into two groups: those who lived in Russia proper and those who lived in other republics (the majority were from the western part of the former USSR). Here, the difference proved to be significant: x^2=4.75, $p<.028$. It appears that those whose place of longest residence was outside Russia (in one of the western Soviet republics) tended to use fewer feminine forms than those who lived in Russia proper (average .46 vs. .60). Parental social status was not a significant factor. Comparison of use of feminine vs. masculine nouns in those who have parents from a blue-collar background and those who come from the families of the intelligentsia and white-collar workers showed only that the average for the first category was slightly higher than that of the second (.58 vs. .54).

The data analyzed in this section provided different results from those obtained by Krysin. In part, this may be due to the fact that in certain sections of our analysis there was a significant imbalance in the size of the two groups: 5 vs. 14 (in analysis of the influence of educational level there were only 5 members with high school education, while in that of social status of parents there were only 5 members with who had parents with blue-collar background). As stated above, we also discovered that the age factor plays a significant role in a given speaker's choice of lexical forms, while according to Krysin, this factor could not be considered statistically significant in all cases. This discrepancy may be explained by the fact that many more lexical items were used for our analysis, and that the age difference spanned 20 years.

3.2. Use of modifiers

Table 3 (Appendix A), in the second part of the analysis, shows how modifiers (relative and possessive pronouns, adjectives, participles) are used in coordination with unchanging masculine nouns (*Доронина – первый/–ая автор этого цикла работ.* Doronina is the first author of this series of works [neutral]; *Сам/-а женорг Дмитриева даже приходила к ней по этому поводу.* 'The organizer of activities for women Dmitrieva visited her at home in about this' [colloquial]). Note that the figure for the average use of feminine modifiers to unchanging nouns is consistent with the one obtained by Graudina (.32 and .31). Note also that grammatical coordination still prevails over analytical coordination. The word most often modified with feminine forms is *женорг* 'organizer of activities for women' (.89). This may be explained in part by the fact that the word *женорг* is a compound noun, and one its parts contains a clear reference to gender (*жен-* as an abbreviation of *женский*). This fact may create a strong impulse in speakers to use feminine. The words least likely to take a feminine modifier are *мастер* 'expert or foreman' and *педагог* 'pedagogue' (.16). Analysis of gender differentiation, i. e., the influence of distinction in gender, age, education, residence and parental social status (Appendix A, Table 4), which followed the same criteria as for the first part of the study, revealed that only the education factor significantly influenced the choice of feminine versus masculine forms. Post-secondary graduates tended to use fewer feminine forms than people with no more than a high-school education: $x^2=3.78$, $p<.049$ (average .25 vs. .53). It is interesting to note that in certain cases informants preferred masculine forms for the noun, but used a feminine attribute (*переводчик неплохая* 'fairly good translator'). The other example, *главная врач* 'head (fem.) physician', showed that the rule prescribed by Protčenko (viz., that the use of feminine adjectives with masculine nouns should be perceived as violation of agreement norms; 1985: 309) is not observed in many instances. As mentioned before, in 31% of the cases, the informants preferred analytical coordination to reflect the natural gender of the subject.

3.3. Coordination

The third area of analysis (Appendix A, Table 5) shows the coordination of nouns with predicates in the past tense (*Новый/-ая педагог Куликова сказал/-а, что необходимо повышать образовательный уровень учащихся.* 'The new teacher Kulikova said that it was necessary to raise the general educational level of students' [neutral style]; *Вера, ты права, в нашем отделе когда-то работал/а этот/-а геолог Таня Иванова.* 'Vera, you're right, this geologist Tanya Ivanova used to work in our department' [colloquial style]). Compared to Graudina's data (95.43% of cases with analytical coordination vs. 4.57% with grammatical coordination), our analysis shows a slightly lower occurrence of feminine coordination: 85%. The highest average occurrence of feminine forms of the verb was obtained in the sentences with the word *ученый/-ая разработал/–а* 'scientist developed' (.95), and the lowest for *уполномоченный/-ая приехал/-а* 'representative came' (.74). The statistical analysis of the data (Appendix A, Table 6) did not show any significant differences in this set of examples. It is interesting to note that some examples from the questionnaire required the use of both modifiers and verbs with professional titles. The informants were not consistent in using all masculine or all feminine forms. Therefore, combinations such as *новый педагог сказала* 'the new (masc.) teacher (masc.) said (fem.)' were encountered on a fairly frequent basis (in contrast with combinations such as *новая педагог сказал* 'the new (fem.) teacher (masc.) said' (masc.), which were not encountered).

3.4. Conclusion

The most significant results arising from our pilot investigation are as follows. First, the younger generation of émigrés to Canada uses fewer feminine derived forms than the older generation. Second, those having lived in Russia proper show a tendency to use feminine forms more frequently than do those who lived in the western Republics of the former USSR. Third, those with a post-secondary education use fewer feminine forms for modifiers of the unchangeable masculine nouns than those with no more than a high school level education. Clearly, as evidenced by these results, certain sociological factors are active in promoting differences in language usage. Thus, it was concluded that further study into gender differentiation in titles and professions would probably reveal interesting results. It seems worthwhile also to review individual nouns more closely. In addition, the following stage of research could concentrate on the influence from extended residence in Canada and other factors.

Chapter 4. MAIN EXPERIMENT

4.0. Methodology

In the main stage of the research, it was decided to make improvements in the corpus and methodology of the previous experiment. The new questionnaire contained 70 items (Appendix C). Within this number, there were 30 sentences with alternating masculine and feminine noun-titles. Some sentences from this set contained occupational titles (e.g., *Наш/–а учитель/–ница, Ирина Петровна, сказала, что поставит мне пятерку по математике в четверти.* "Our teacher, Irina Petrovna, said that she would give me an "A" in math for the term."). Other sentences from this set contained personal titles (e.g., *Света и есть виновник/-ца сегодняшнего торжества!* "It's Sveta who is the hero of today's occasion."). In the other 10 sentences the gender of a modifier (adjective, participle or pronoun) to a noun-title used in the masculine form was tested (e.g., *Участковый/–ая врач Галина Викторовна бережно относится к своим пациентам.* 'The district physician Galina Viktorovna takes good care of her patients.'). Finally, 10 more sentences tested gender differentiation of preterit verbs referring to masculine noun-titles denoting women's occupations (e.g., *Филина, бригадир нашего участка, находился/–лась в декретном отпуске.* 'Filina, the foreman of our section, was on maternity leave.'). Each sentence, unlike in the previous study, tested only one variation, i.e., the gender of a noun, or of an adjective/participle/pronoun, or of a preterit verb, since this arrangement avoids confusion in categorizing responses of participants and simplifies statistical analysis. The remaining 20 sentences in the questionnaire were used as distracters, and tested the use of endings *–а/я* and *–у/ю* in the partitive genitive (these data could be used in the future research). These 20 sentences were disregarded in further analysis. Sentences from the questionnaire were submitted to 3 other native Russian speakers who confirmed the possibility of gender variation in each item, and made suggestions on how to make sentences sound "more natural".

Since the preliminary study indicated a difference in responses due to the location of subjects' residence, i.e., more masculine noun forms were found in responses of those participants who lived outside Russia proper (and mostly in the western areas of the former USSR), it was decided to implement the new study in several locations. For this purpose, the experiment was designed to be conducted in Belarus, where the Russian language is widely used, but the population is also influenced by both the native Belorusian language and the Polish language. In Polish, according to Polianski (1998), there is a strong tendency to use more masculine forms in professional titles of women. Thus, it may be expected that gender differentiation in referential titles in the speech of the Belorusian population using the Russian language will be influenced by this factor. However, no information on this subject is currently available.

It was also decided to conduct the experiment in Chisinau, Moldova, one of the former Soviet republics, where the Russian language had been widely used before the 1990s, but later was replaced by the Moldavian language. This Romance language, incidentally, quite clearly differentiates the gender of nouns, and consequently, of personal and professional titles by the use of articles which have gender distinctions (Korletjanu, 1966).

E.g. *un student* 'a student (Nom. Sg. masc.)'
studentul 'the student (Nom. Sg. masc.)'
o studente 'a student (Nom. Sg. fem.)'
studenta 'the student (Nom. Sg. fem.)'

The morphological structure of Modern Moldavian allows derivation of feminine gender of nouns denoting professional titles, the corresponding feminine gender forms of which in the Russian language are used only in colloquial context, or with pejorative connotation. Thus, feminine gender forms like *arhitektore* ('architect'), *inginere* ('engineer'), *advokate* ('lawyer') are widely used without colloquial stylistic coloration and do not refer to a professional's wife which is characteristic of Russian (Korletjanu, *et al.* 1973: 188). According to these authors, in Modern Moldavian there is a tendency to form feminine gender forms from all nouns denoting professions and specializations. In certain instances, however, the use of masculine noun-titles to refer to women's professional titles is possible in Modern Moldavian, but the number of such titles is very limited, and much smaller than in Russian, most of them being borrowings from Russian and other languages.

E.g. *Ea e rector.* 'She is the rector (masc.).'
Ea e kandidat. 'She is the candidate (masc.).'

If a feminine occupational title has a dependent modifier, it is absolutely mandatory that both be overtly marked:

E.g., *Ea e directorea noastra*. 'She is our (fem.) director (fem.)'

Consequently, if the masculine gender is used for certain nouns, there must be agreement of the noun and the modifier in the masculine gender. In preterit verbs gender distinction in Moldavian is not realized.

The experiment was also conducted in Russia proper, in 2 locations: Moscow and Krasnoyarsk (Eastern Siberia), the latter being chosen because this location has a predominately Russian population, is distant from the European part of Russia, and has been exposed to virtually no influence from the western languages. It was also decided to conduct the study in North America among Russian émigrés who are subject to an intense influence of the English language in which gender distinction in the titles of women is seldom observed.

As in the previous study (Chapter 3. **Pilot study**), all sentences were composed in neutral and colloquial style, since in the formal style, as was mentioned earlier, speakers would tend to use masculine gender more frequently for feminine occupational or personal titles. Excessively colloquial style was also avoided since more feminine is expected to be found in this case (Yokoyama 1999).

Neutral: *Раиса Сметанина – чемпион/–ка мира в эстафетной гонке.* 'Raisa Smetanina is a world champion in the relay race.'

Colloquial: *– Слышала, где Света сейчас работает? – Она воспитатель/–ница в детском саду.* '- You know where Sveta works now? - She is a day-care worker.'

To achieve valid statistical results, it was advised that in each location at least 75 participants had to be interviewed. This excluded the possibility of conducting oral interviews with all target participants. Therefore, the subjects were asked to fill out the questionnaires in written form.

In order to test the influence of social factors on the choice of feminine or masculine gender for occupational and personal titles, the participants were asked to give the following data:

1) gender,
2) age,
3) education level (higher education: university; non-completed higher education, i. e., 3.5 years or more of university); technical school; high school or non-completed high school),
4) location of longest residence in the former Soviet Union (republic, urban or rural areas),
5) place of residence from 3 to 10 years of age (republic, urban or rural areas),
6) place of employment and position,
7) location of parents origin (separately for both parents, reflecting the information on the republic, and rural or urban areas),
8) parents' education (separately for both parents, reflecting the levels: higher education (university), technical school or high school).

Participants in Canada were also requested to provide information on the duration of their stay in Canada. It was decided to choose for the experiment only those participants who had resided in Canada not less than one year.

It was chosen to limit the age of the participants from 16 to 80 years. The location of residence from 3 to 10 years of age was considered important because it is predicted that language competence is formed mostly in this age period, and thus influences a person's language use over the whole period of life. The place of employment and position were included to establish (in combination with other social factors) to what social class participants belonged. All participants were informed in the preamble to the questionnaire that their participation was anonymous, and that the analysis would be conducted by combining data from the groups of participants.

In addition, to decrease the possible influence of methodological factors, the questionnaires were produced in two versions. In one type, the participants filled in the blanks in the endings of words, and in the other type they were requested to choose from two variants of the sentence, which differed in the endings of the words being tested. Originally, the research was designed to include a third type of questionnaires: acceptability judgment with the scale of 1 to 5 (1 - not acceptable at all, 2 - acceptable, but not natural, 3 - difficult to make judgement, 4 – acceptable with some reservations, 5 – fully acceptable). However, this idea was later abandoned in view of two factors. First, some participants (especially those with lower levels of education) found it quite difficult to grasp the idea of acceptability. Second, the use of data based on a scale of 1 to 5 excluded the possibility of an analysis combining these data with the data from the other two types of questionnaires which categorized answers only into two groups (masculine or feminine).

On the basis of the results of the previous research it was hypothesized that:
Hypothesis 1. There would be more feminine forms used overall.
Hypothesis 2. The masculine gender would be used more for modifiers than in noun-titles and preterit verbs.
Hypothesis 3. The factor of the area of residence would play an important role. More masculine gender in noun-titles would be used in the Edmonton and Minsk study areas than in Moscow and Krasnoyarsk, while more feminine gender would be used in Chisinau study area than in others.

Hypothesis 4. The difference in the sex of participants most likely would not produce significant differences in choice of gender.

Hypothesis 5. Older participants would use more feminine noun-titles, but fewer feminine adjectives and preterit verbs.

Hypothesis 6. The higher the education level of the participants, the more masculine noun-titles, but the fewer feminine modifiers and preterit verbs they would use.

Hypothesis 7. The intelligentsia and white-collar workers would use more masculine noun-titles, fewer feminine modifiers to masculine noun-titles and fewer feminine verb forms,

Hypothesis 8. Those having lived in their childhood in smaller communities would tend to use more feminine noun-titles, more feminine modifiers with masculine noun-titles and fewer masculine verb forms.

Hypothesis 9. Participants whose parents migrated to a study area from other areas would differ from participants whose parents lived in the same study area.

Hypothesis 10. Participants whose parents originate from rural areas would use more feminine noun-titles, more feminine modifiers with masculine noun-titles and more masculine verb forms.

Hypothesis 11. Participants whose parents had less education would use more feminine noun-titles, more feminine modifiers with masculine noun-titles, and fewer masculine verb forms.

The experiment was also designed to prove that the structural properties of the sentences and the morphological composition of items from the questionnaire would influence gender differentiation (Hypothesis 12). All sentences contained some sort of reference to gender: a proper name, a preterit verb (except, of course, sentences in which the use of past tense verbs was tested), or a personal pronoun. The reference to gender was placed anterior or posterior to the tested items, and was either adjoining the tested item or separated from it by other words in the sentence.

E.g., *В отличии от тебя, Саша, Нина – энтузиаст/–ка своего дела.* 'Unlike you, Sasha, Nina is an enthusiast for her job.' (Adjoining preceding)

Известный/–ая филолог Граудина уже исследовала этот вопрос. 'The famous linguist Graudina has already investigated this issue.' (Adjoining following)
Геолог Семенова действительно когда–то работал/–а у нас. 'The geologist
Semenova in fact once worked for us.' (Separated preceding)
– Перед вами дебютант/–ка наших соревнований – Строганова Маша. 'Let me introduce to you a first-time participant in our competition, Masha Stroganova.' (Separated following)

Some sentences containing noun-titles with two possible gender forms, and some sentences containing modifiers with masculine noun-titles, had verbs in the past tense, and were tested for the influence of this factor on the choice of gender.

E.g., *– Я все это уже много раз слышала, – сказала им строгий/–ая комендант нашего общежития.* '- I've heard this many times, - said the austere superintendent of our hostel to them.'

Some nouns with two corresponding gender forms morphologically represented substantivized adjectives/participles, and it was decided to test whether they acted differently from " true" nouns.

E.g., *После войны ее назначили на новую должность: заведующего/–ей РОНО.* 'After the war she was appointed to a new position, School Board Director.'

In some sentences of the questionnaire noun-titles with two corresponding gender forms had a subordinate declinable specifier, and this was chosen to be tested for possible influence on the choice of gender as well.

E.g., *Она прекрасно пишет стихи и статьи, и она неплохой/–ая переводчик/–ца.* 'She writes wonderful poetry and essays; she is a quite good translator as well.'

It is interesting to note that in 12 instances of the above set, participants opted to use a masculine noun-title with a feminine modifier (e.g., *единственная исполнитель*, 'the only one who performs something').

Finally, some sentences had a double (or triple) reference to the gender versus other sentences which contained only one, and the influence of this factor on gender differentiation was also subjected to testing.

E.g., - *Лена не работает у нас постоянно, она только практикант/–ка.* 'Lena doesn't work permanently with us; she is only a probationer.'

In the course of several trips to Belarus, Russia, and Moldova (and with the assistance of volunteer helpers in these locations), the desired number of questionnaires was collected. The total number of participants amounted to 481. There were 104 participants in Minsk, 88 in Moscow, 90 in Chisinau, 117 in Edmonton, and 82 in Krasnoyarsk.

For the purposes of statistical analysis, the raw scores of the participants' responses were converted into the proportions of the use of masculine versus feminine. In testing a particular factor, all the scores for masculine for all items in a certain category were aggregated, and then divided by the number of participants representing a certain tested group and by the number of items in the tested category (i.e., 30 for noun-titles, 10 each for modifiers and verbs used with masculine noun-titles, and 50 for all items taken together).

The data were designed with the aim of testing for significance in variation and response coincidence. Multivariate analyses, *t*-tests, factor analysis, and cluster analysis were implemented for this purpose. The procedure for Multivariate analyses included the calculation of Between-Subjects Factors; derivation of Descriptive Statistics and profile plots of Estimated Marginal Means of the tested social factors by areas; Multivariate Tests using 4 methods (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root); Levene's Test of Equality of Error Variances; Tests of Between-Subject Effects; and Post Hoc Tests, which included Bonferroni Multiple Comparisons of the study areas and the tested social factors. The procedures for the *t*-tests included the derivation of Paired Samples Statistics, Paired Samples Correlations, and Paired Samples Tests. Procedures for Factor analysis included the derivation of a Correlation Matrix, Component Transformation Matrix, Scree Plot, and Rotated Component Matrix. Procedures for Cluster analysis included the derivation of a Proximity Matrix, Agglomeration Schedule, Cluster Membership, Verticle Icicle, and Average Linkage Dendrogram. For the statistical analysis of data the SPSS 10.0 software was implemented.

4.1. Frequency analysis

All the data obtained in the questionnaires were categorized and tabulated. In the initial stage of statistical analysis, a frequency analysis was conducted (Appendix A, Table 7).

Participants from Belarus (Minsk) constituted 21.6% of the overall number of participants, from Moscow (European Russia) 18.3%, from Krasnoyarsk (Eastern Siberia) 17.0%, from Chisinau (Moldova) 18.7%, and from Edmonton 24.3%.

Calculations showed that 170 males (35.3% of the total) and 311 females (64.7%) participated in the experiment.

The age of participants varied from 17 to 84. Generally, there were more participants in the age group 17 to 51, and fewer in the age bracket 52 to 84 years. The highest percent (5.8%) was observed for the age of 20 years, and the lowest (0.2%) for the ages 65, 66, 80 and 84.

The calculation of the period of residence in Canada, for participants from Edmonton, indicated that the data varied from 1 year to 24 years. The higher percentage of residence was for the periods of 1 to 4 years (14.5% for 1 and 2 years, and 16.2% and17.1% for 3 and 4 years), and the lower for the residence of 5 to 24 years (from 7.7% for 6 years to 0.9% for 24 years).

In terms of education level, the participants with non-completed high school education constituted 2.7 % of the total, with high school education 22.7 %, with technical school education 17.7%, with non-completed higher education (universities and institutes) 7.1%, and with higher education (universities and institutes, undergraduate and graduate degrees) 49.9%.

In terms of residence of participants from the age of 3 to 10 years, the frequency analysis indicated that 15.4% of participants lived at that period of their lives in the area outside the one in which they lived most of their lives (in both urban and rural areas); 44.5% lived in the capital of the region (e.g., Minsk for Belarus, Moscow for the area of European Russia, Krasnoyarsk for Eastern Siberia, Chisinau for Moldova); 14.1% lived in other big cities of the same region, 13.9% in towns, and 11.2% in villages. In 0.8% of cases the participants failed to provide this type of information, and it was considered as missing data in statistical analysis.

The data on work places and positions gave a variety of responses. It appeared to be difficult to form groups of participants according to their professions. Hence, these data was used primarily to establish whether subjects belonged to a specific social group or class, i.e., intelligentsia, white-collar workers and blue-collar workers.

The analysis of frequency indicated that participants both of whose parents were from outside the area where the participants lived most of their lives constituted 21.0%, those both of whose parents resided in the same area – 60.9%, and those who had parents from both outside and inside the areas – 17.3%. Missing data accounted for 0.8%.

In addition, the data showed that in 33.3% of the cases both parents of participants originated from rural areas, in 47.4% cases both parents were of urban origin, and in 15.8% of cases the parents' origin was mixed (rural and urban). Missing data constituted 3.5%.

The frequency analysis of parents' education revealed that in 39.3% of the cases the level of education of participants' fathers was high school or lower, in 13.5% of the cases they had technical school education, and in 45.5% they had completed or non-completed university (institute) education, with missing data being 1.7%. Mothers of participants in 38.7% of the cases had a high school, or lower, level of education, in 18.1% - technical school education, and in 43.0% of the cases had completed or non-completed university degrees, with the missing data in this category being 0.2%.

In the next stage of the frequency analysis, the data on individual items/sentences of the questionnaire were evaluated (Tables 1–3T). All entries revealed variation in responses. The overall indices of use of masculine gender vacillated from 3.1% (item 20 *бригадир находился/-ась* 'foreman was') to 81.5% (item 16 *первый/–ая стажер*, 'first apprentice'). Within this overall scheme, specific usages were as follows.

The use of masculine gender in noun-titles with two corresponding gender forms (Table 1T) varied from 80.8% (item 47 *оппонент/-ка* 'opponent') to 23.7% (item 36 *виновник/-ца* 'hero of the occasion). It is interesting to note here that, as in the preliminary study (Chapter 3. **Pilot study**), the three items with substantivized participles having dependent words (*районный/–ая уполномоченный/–ая* 'regional representative', *заведующий/-ая РОНО* 'School Board Director', and *управляющий/-ая делами* 'manager') were used by participants not only in the masculine gender, as was predicted by Protčenko (1975: 232). For the first one in 31.4%, for the second in 73.8%, and for the third in 63.8% of the cases, the feminine gender was preferred.

TABLE 1T. ITEM FREQUENCY
NOUN-TITLES

	Frequency	Percent		Frequency	Percent
#5 *преподаватель/–ница* 'instructor'			#38 *писатель/–ница* 'writer'		
masculine	345	71.7	masculine	196	40.7
feminine	136	28.3	feminine	285	59.3
#7 *студет/–ка* 'student'			#40 *переводчик/–ца* 'translator'		
masculine	155	32.2	masculine	277	57.6
feminine	326	67.8	feminine	204	42.4
#10 *заведующий/–ая* 'executive'			#42 *патриот/–ка* 'patriot'		
masculine	131	27.2	masculine	131	27.2
feminine	350	72.8	feminine	350	72.8
#11 *учитель/–ница* 'teacher'			#44 *упавляющий/–ая* 'manager'		
masculine	154	32.0	masculine	174	36.2
feminine	327	68.0	feminine	307	63.8
#15 *чемпион/–ка* 'champion'			#45 *активист/–ка* 'activist'		
masculine	133	27.7	masculine	203	42.2
feminine	348	72.3	feminine	278	57.8
#17 *поэт/–есса* 'poet'			#47 *оппонент/–ка* 'opponent'		
masculine	204	42.4	masculine	379	80.8
feminine	277	57.6	feminine	102	19.2
#19 *уполномоченный/–ая* 'representative'			#48 *ассистент/–ка* 'assistant'		
masculine	330	68.6	masculine	301	62.6
feminine	151	31.4	feminine	180	37.4
#21 *ученый/–ая* 'scientist'			#51 *претендент/–ка* 'contender'		
masculine	253	52.6	masculine	161	33.5
feminine	228	47.4	feminine	320	66.5
#23 *лаборант/–ка* 'lab assistant'			#52 *акушер/–ка* 'obstetrician'		
masculine	303	63.0	masculine	172	35.8
feminine	178	37.0	feminine	309	64.2
#24 *отличник/–ца* 'excellent worker'			#57 *корреспондент/–ка* 'correspondent'		
masculine	138	28.7	masculine	327	68.0
feminine	343	71.3	feminine	154	32.0
#26 *энтузиаст/–ка* 'enthusiast'			#63 *воспитатель/–ница* 'child-care worker'		
masculine	296	61.5	masculine	210	43.7
feminine	185	38.5	feminine	271	56.3
#28 *партнер/–ша* 'partner'			#66 *художник/–ца* 'artist'		
masculine	165	34.5	masculine	262	54.5
feminine	315	65.5	feminine	219	45.5
#30 *кассир/–ша* 'cashier'			#68 *оптимист/–ка* 'optimist'		
masculine	320	66.5	masculine	185	38.5
feminine	161	33.5	feminine	296	61.5
#35 *дебютант/–ка* 'first-time participant'			#69 *исполнитель/–ница* 'performer'		
masculine	211	43.9	masculine	193	40.1
feminine	270	56.1	feminine	288	59.9
#36 *виновник/–ца* 'hero of the day			#71 *практикант/–ка* 'probationer'		
masculine	114	23.7	masculine	188	39.1
feminine	367	76.3	feminine	293	60.9

In the category of modifiers with masculine noun-titles (Table 2T), the use of masculine gender varied from 81.5% (item 16 *первый/–ая стажер* 'the first apprentice') to 72.1% (item 62 *безусловный/-ая автор* 'indisputable author'). Let us note that similarly to the previous data (see Chapter 3. **Pilot study**) means for the use of feminine in coordination of a pronoun (*свой/–ая*) were not different from means in coordination of adjectives and participles, which is in contrast to Protčenko's (1985:309) prediction.

TABLE 2T. ITEM FREQUENCY
MODIFIERS

#2 *новый/–ая педагог* 'new pegagogue'	Frequency	Percent	#31*свой/–ая парикмахер* 'own hairdresser'	Frequency	Percent
masculine	366	76.1	masculine	378	78.6
feminine	115	23.9	feminine	103	21.4
#6 *участковый/–ая врач* 'district physician'			#33 *строгий/–ая комендант* 'austere superintendant'		
masculine	370	76.9	masculine	359	74.6
feminine	111	23.1	feminine	122	25.4
#12 *молодой/–ая мастер* 'young foreman'			#50 *известный/–ая филолог* 'famous linguist'		
masculine	371	77.1	masculine	375	78.0
feminine	110	22.9	feminine	105	21.8
#14 *хороший/–ая референт* 'good reviewer'			#62 *безусловный/–ая автор* 'indisputable author'		
masculine	392	81.5	masculine	347	72.1
feminine	89	18.5	feminine	134	27.9
#16 *первый/–ая стажер* 'first apprentice'			#67 *энергичный/–ая директор* 'energetic director'		
masculine	391	81.3	masculine	375	78.0
feminine	90	18.7	feminine	106	22.0

In sentences with past tense verbs referring to masculine noun-titles denoting occupational terms of women (Table 3T), the use of masculine gender varied from 38.7% (item 64 *приехал/-а ревизор* 'auditor arrived') to 3.1% (item 20 *бригадир находился/-ась* 'foreman was (on maternity leave)'. It is interesting to note how context influenced the choice of gender. The highest mean of masculine is observed in the sentence (*приехал/-а ревизор*), which is reminiscent of Gogol's famous line from the play «Ревизор», widely used in conversations. In this play, the phrase pertained to a male person character. It is quite probable that the participants of the experiment were making their choice of masculine under the influence of this context. In the other example (*бригадир находился/-ась*), the means of masculine was the lowest, probably because the context describes the situation uniquely characteristic of women (being on a maternity leave), and not men. Thus, the participants of the experiment may have felt that the use of masculine in this situation was unacceptable. We should note here that the observed means for the use of masculine in the present research are considerably lower than those reported in Panov's study, but, on the other hand, higher than the data from Graudina and Martynyuk (see Chapter 2).

TABLE 3T. ITEM FREQUENCY
VERBS

#3 *геолог работал/–а* 'geologist worked'
#55 *врач–рентгенолог был/–а* 'X-ray physician was'

	Frequency	Percent		Frequency	Percent
masculine	54	11.2	masculine	103	21.4
feminine	427	88.8	feminine	378	78.6

#9 *министр прилетел/–а* 'minster arrived by plane'
#59 *синоптик заболел/–а* 'weather researcher became ill'

masculine	99	20.6	masculine	40	8.3
feminine	382	79.4	feminine	441	91.7

#20 *бригадир находился/–лась* 'team-leader was (on maternity leave)'
#60 *редактор просмотрел/– а* 'editor looked through (the manuscript)'

Masculine	15	3.1	masculine	46	9.6
Feminine	466	96.9	feminine	435	90.4

#37 *фельдшер пришел/–ла* 'nurse came'
#64 *ревизор приехал/–а* 'auditor arrived'

masculine	25	5.2	masculine	186	38.7
feminine	456	94.8	feminine	295	61.3

#49 *председатель открыл/–а* 'chairman opened (a meeting)
#70 *директор приветствовал/–а* 'director greeted'

masculine	57	11.9	masculine	59	12.3
feminine	424	88.1	feminine	422	87.7

Means of the frequency analysis in this section are quite consistent with the results of the pilot study. Even a simple observation of frequency data allows us to confirm that noun-titles with two corresponding gender forms from the questionnaire of the presentstudy can be used, more or less equally, both in masculine or feminine, that modifiers with masculine noun-titles referring to women tend to be used much more in the masculine, and that past tense verbs referring to masculine noun-titles denoting occupational terms of women have a tendency to be used mostly in the feminine gender.

4.2. Analysis of significance in variation

For the analysis of significance in variation of use of gender, it was opted to implement Multivariate Tests and Paired Samples *t*-tests. Statistics for each analysis were based on the cases with no missing or out-of-range data for any variable in the analysis.

4.2.1. The use of masculine gender versus feminine

For the analysis of the use of gender in all entries of the questionnaire, the items were grouped in paired categories:

1) All cases of noun-titles used in the masculine gender, i.e., without overt feminine markers, vs. all cases of noun-titles used in the feminine gender with overt feminine markers (henceforward, **noun-titles**)

2) All cases of masculine modifiers with masculine noun-titles referring to women versus all cases of feminine modifiers with masculine noun-titles referring to women (henceforward, **modifiers**)

3) All masculine past tense verbs referring to masculine noun-titles denoting women versus all feminine past tense verbs referring to masculine noun-titles denoting women (henceforward, **verbs**)

4) all the above three types of categories taken together in the masculine *versus* in the feminine (henceforward, **items pooled**). Although the trends of gender differentiation in the three above-mentioned categories are different, the category of 'items pooled' was added to investigate the "general" situation, given that the proportions of items used in the experiment (30 noun-titles, 10 modifies, and 10 verbs) may roughly reflect the occurrence of these categories in speech.

Paired Sample Statistics (Appendix A, Table 8) showed that in the first pair, **noun-titles** in the masculine had a mean value (*M*, henceforward, according to APA specification of symbols) of 13.91 while in the feminine *M*=16.09, with a standard deviation of sd=6.17. These numbers show that in the present study the participants used more feminine noun forms on the average. In the second pair, the means were *M*=7.74 for all masculine **modifiers** and *M*=2.25 for feminine **modifiers**, with a standard deviation of sd=2.54. Again, these numbers confirm that on the average in the present study the participants tended to use more masculine **modifiers**, i.e., preferred grammatical agreement. In the third pair, the mean for **verbs** in the masculine constituted *M*=1.42, and *M*=8.58 in the feminine, with a standard deviation of sd=1.77. Thus, the mean values confirm that the participants used more semantic agreement in combinations of past tense verbs with masculine noun-titles referring to women. In the fourth pair, the mean values of **items pooled** in the masculine constituted *M*=23.05, and *M*=26.95 in the feminine, with a standard deviation of sd=7.76. Thus, it indicates that, overall, more feminine forms were used in the material of the present experiment.

In the next stage, the statistical analysis for significance in differences was executed. Paired Samples Tests revealed that for all 4 pairs differences were significant (Table 4T): significantly more feminine **noun-titles**, significantly more masculine **modifiers**, significantly more feminine past tense **verbs**, and significantly more feminine forms for **items pooled** were used. Thus, Hypothesis 1 and Hypothesis 2 have been confirmed.

TABLE 4T. MASCULINE VS. FEMININE
Paired Samples Test

	Paired Differences Mean	Sd	Std. Error Mean	99% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
NOUN-TITLES MASC vs. FEM	-2.1837	12.345	.5641	-.36425	-.7249	-3.871	481	.000
MODIFIERS MASC vs. FEM	5.4833	5.0814	.2319	4.8835	6.0831	23.642	481	.000
VERBS MASC vs. FEM	-7.1559	3.4518	1615	-7.5736	-6.7383	-44.311	481	.000
ITEMS POOLED MASC vs. FEM	-3.9079	15.517	.7097	-5.743	-2.072	-5.506	481	.000

4.2.2. Study areas

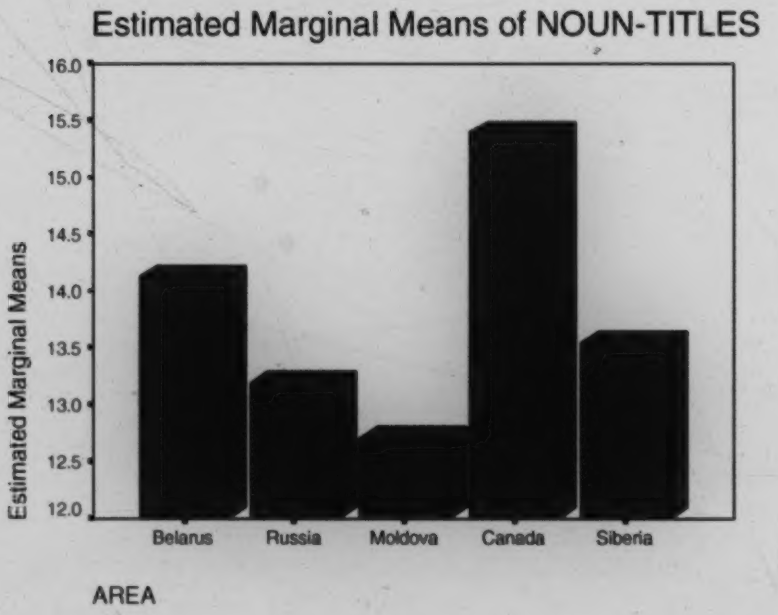
In the next part of the analysis, differences between the study areas were investigated. Descriptive Statistics (Appendix A, Table 9) revealed that there are quite pronounced differences between the study areas. Results are plotted on graphs; in every instance, the mean incidence of masculine gender is shown.

Note that the difference in the number of items in the four tested categories (i.e., **noun-titles, modifers, verbs**, and **items pooled**), and differences in the distribution of means in these categories give rise to different scales of ordinants on the plots. What *appears* to be a greater difference between means for verbs than, for example, for nouns, is not in fact the case.

Thus, in **noun-titles** (Plot 1) the highest means for the use of masculine were observed in Edmonton (M=15.39, sd=6.98), and the lowest in Chisinau (M=12.71, sd=6.36). Responses of participants from Minsk obtained means for the masculine that were slightly lower than in Edmonton (M=14.13, sd=5.76), but still higher than in all remaining areas. The means for the use of masculine in Moscow and Krasnoyarsk were essentially on the same level: M=13.19, sd=5.54, and M=13.55, sd=6.00, respectively. On the basis of the differences in the means, we may claim that influence of a foreign language on gender differentiation in Russian is quite important in the category of **noun-titles**. As predicted, more masculine was used in Edmonton and Minsk study areas, and less in Chisinau, while Moscow and Krasnoyarsk occupied an intermediate position.

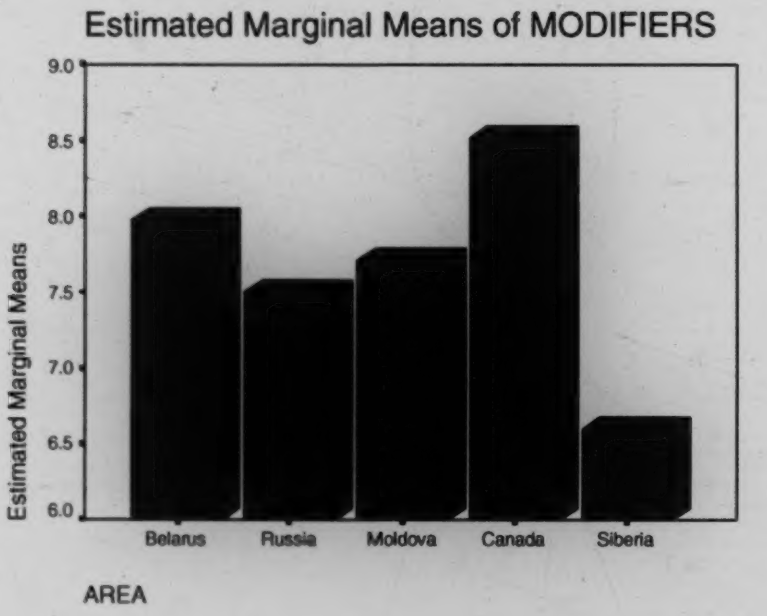
In the category of **modifiers** (Plot 2), the obtained means for the use of masculine differed considerably from those for the category of **noun-titles**. Although participants from Edmonton and Minsk again scored the highest means: M=8.51, sd=2.15, and M=7.97, sd=2.15, respectively, the third highest mean was obtained by participants

PLOT 1. STUDY AREAS



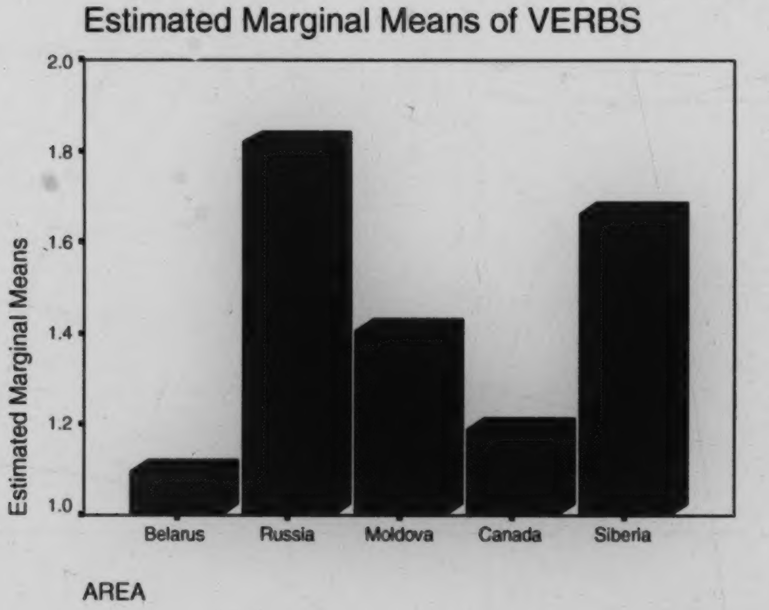
from Chisinau (*M*=7.71, sd=2.92). The mean values observed for participants from Moscow were quite close to those from Moldova (*M*=7.50, sd=2.82), but the mean values of masculine for participants from Krasnoyarsk were considerably lower than in other areas (*M*=6.60, sd=2.33). Thus, we may note here that in the category of **modifiers** the influence of a foreign language was similar to the trends in **noun-titles** in the Edmonton and Minsk areas, but was substantially different in the Chisinau and Krasnoyarsk areas. Differences in the Chisinau study area may be attributed to the fact that the Moldavian language requires strict grammatical coordination of modifiers and nouns. Since in the present study noun-titles, combined with the modifiers, were always in the masculine, this may explain higher mean values in the Moldavian area in the category of **modifiers**. No adequate explanation, other than the influence of other social factors, for the low level of the mean value for the masculine in Krasnoyarsk study area could be found.

PLOT 2. STUDY AREAS



The mean values of the use of masculine in the category of **verbs** (Plot 3), reveal a picture quite opposite to that for the categories of **modifiers** and **noun-titles**. The lowest means for the use of masculine were observed in Minsk and Edmonton: *M*=1.10, sd=1.65, and *M*=1.18, sd=1.74, respectively, while responses from the Moscow study area had considerably higher means (*M*=1.82, sd=1.82), while Chisinau and Krasnoyarsk occupied an intermediate position (*M*=1.40, sd=1.89, and *M*=1.66, sd=1.56). It allows us to say that the tendencies in the use of masculine in verbs are the reverse as compared to those for modifiers and noun-titles in the 5 study areas of the present experiment. Commenting on the high mean value for the use of masculine in Moscow as compared to other study areas we may assume that this phenomenon may be explained by the fact that Moscow is "a center of language norm", which in the previous years prescribed formal coordination of preterit verbs and professional titles. This may have influenced the choice of gender in favour of the masculine in participants from this particular study area, while participants from other study areas of the Former Soviet Union were more "liberal" in their choices.

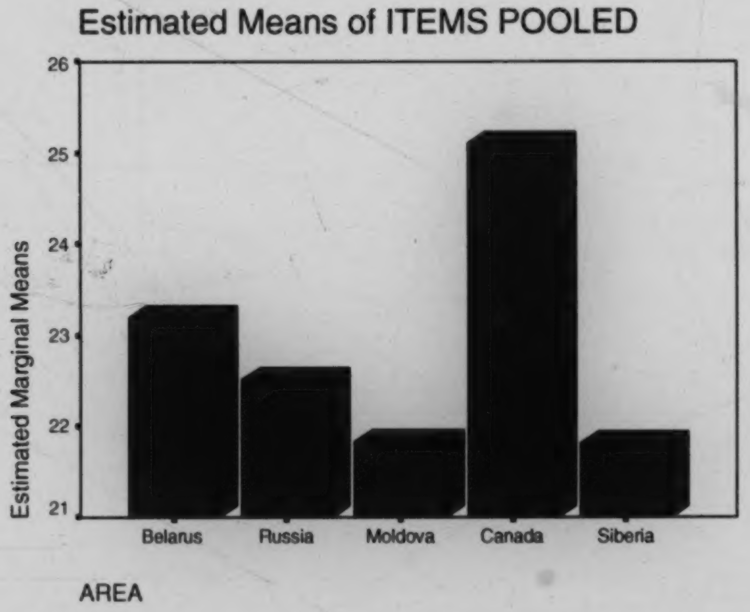
PLOT 3. STUDY AREAS



The comparison of means for **items pooled** (Plot 4.) reveals a picture similar to the comparison of means **noun-titles**; however, there are important differences. Responses from Edmonton obtained the highest mean of the use of masculine (*M*=25.09, sd=8.32), while means from other areas were considerably lower: Minsk – *M*=23.19, sd=6.49, Moscow – *M*=22.51, sd=7.56, and Chisinau and Krasnoyarsk almost on the same level (*M*=21.82, sd=8.85, and *M*=21.81, sd=6.86).

Thus, we may argue that the influence on the choice of masculine gender is most prominent when people were exposed to the English language. The same, but to a lesser degree in terms of the influence of Polish, can be claimed regarding the situation in Belarus. However, in Moldova, the influence of the local language is such that it promotes more use of feminine than in the areas without (or with little) interference of foreign languages, i.e., Moscow and Krasnoyarsk.

PLOT 4. STUDY AREAS



The Multivariate analysis of variance revealed that there was a significant difference between AREAS on the set of the following variables: masculine **noun-titles**, **modifiers**, **verbs** and **items pooled** (F=4.428, df=12, p<.001) (Appendix A, Table 10).

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for all examined variables, i.e., masculine **noun-titles**, **modifiers**, **verbs** and **items pooled** (Appendix A, Table 11).

The Bonferroni Post hoc tests revealed the existence of significant differences between AREAS in masculine **noun-titles**, **modifiers**, **verbs** and **items pooled** (Table 5T). In the category of **noun-titles**, participants from Edmonton used significantly more masculine gender than participants from Chisinau. In the category of **modifiers**, participants from Krasnoyarsk used significantly less masculine gender than participants from Edmonton, Minsk, and Chisinau. In addition participants from Edmonton used significantly more masculine gender than participants from Moscow. In the category of **verbs**, participants from Minsk used significantly less masculine gender than participants from Moscow. Finally, for **items pooled**, participants from Edmonton used significantly more masculine gender than participants from Chisinau and Krasnoyarsk.

TABLE 5T. STUDY AREAS
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
NOUN-TITLES	Canada	Moldova	2.6853	.8591	.019	.2624	5.1082
MODIFIERS	Belarus	Siberia	1.3712	.3671	.002	.3358	2.4065
	Russia	Canada	-1.0128	.3483	.038	-1.9952	-3.0408
	Moldova	Siberia	1.1079	.3803	.038	3.522	2.1805
	Canada	Siberia	1.9128	.3581	.000	.9028	2.9229
VERBS	Belarus	Russia	-.7220	.2514	.043	-1.4312	-1.2876
ITEMS POOLED	Moldova	Canada	-3.2738	1.0724	.024	-6.2985	-.2491
	Canada	Siberia	3.2815	1.1062	.032	.1617	6.4013

Based on observed means.
The mean difference is significant at the .05 level

Thus, the statistical analysis confirms that there are significant differences in responses in various areas and Hypothesis 3 has been confirmed.

In the next stage of the research, differences in the use of masculine versus feminine gender were investigated in each study area.

Paired Samples Statistics for Belarus (Appendix A, Table 12) indicated that the mean values of the use of masculine were lower than the mean values of the use of feminine in **noun-titles** (M=14.13 *versus* M=15.86, with a standard deviation of 5.76), **verbs** (M=1.10 *versus* M=8.90 with a standard deviation of 1.65), and items pooled (M=23.19 *versus* M=26.81, with a standard deviation of 6.49), while in modifiers more masculine gender than feminine gender was used (M=7.97 *versus* M=2.03, with a standard deviation of 2.20). The Paired Sample T-Test for significance (Table T6) revealed that difference reached significance level in the categories of **modifiers**, **verbs**, and **items pooled**.

In the Moscow study area, Paired Samples Statistics (Appendix A, Table 13) indicated that the mean values of the use of masculine were lower than the mean values of the use of feminine in **noun-titles** (M=13.19 *versus* M=16.80, with a standard deviation

TABLE 6T. MINSK STUDY AREA

Paired Samples Test

		Paired Differences Mean	Sd	Std. Error Mean	99% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	NOUN-TITLES MASC - NOUN-TITLES FEM	-1.7500	11.5168	1.1293	-4.7138	1.2138	-1.550	103	.124
Pair 2	MODIFIERS MASC - MODIFIERS FEM	5.9423	4.3929	.4308	4.8118	7.0728	13.795	103	.000
Pair 3	VERBS MASC- VERBS FEM	-7.8077	3.2919	.3228	-8.6548	-6.9605	-24.188	103	.000
Pair 4	ITEMS POOLED MASC - ITEMS POOLED FEM	-3.6154	12.9737	1.2722	-6.9541	-.2767	-2.842	103	.005

of 5.54), **verbs** (*M*=1.81 *versus M*=8.18 with a standard deviation of 1.82), and **items pooled** (*M*=22.51, *versus M*=27.49, with a standard deviation of 7.56), while in **modifiers** more masculine gender than feminine gender was used (*M*=7.50 *versus M*=2.50, with a standard deviation of 2.82). The Paired Sample *T*-Test for significance revealed that difference reached significance level in the categories of **noun-titles, modifiers, verbs**, and **items pooled** (Table 7T).

TABLE 7T. MOSCOW STUDY AREA

Paired Samples Test

		Paired Differences Mean	Sd	Std. Error Mean	99% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	NOUN-TITLES MASC- NOUN-TITLES FEM	-3.6136	11.0708	1.1801	-6.7216	-.5057	-3.062	87	.003
Pair 2	MODIFIERS MASC - MODIFIERS FEM	5.0000	5.6406	.6013	3.4165	6.5835	8.315	87	.000
Pair 3	VERBS MASC - VERBS FEM	-6.3636	3.6331	.3873	-7.3836	-5.3437	-16.431	87	.000
Pair 4	ITEMS POOLED MASC - ITEMS POOLED FEM	-4.9773	15.1194	1.6117	-9.2218	-.7327	-3.088	87	.003

Paired Samples Statistics for the Chisinau study area (Appendix A, Table 14) indicated that the mean values of the use of masculine were lower than the mean values of the use of feminine in **noun-titles** (*M*=12.71 *versus M*=17.29, with a standard deviation of 6.36), **verbs** (*M*=1.40 *versus M*=8.60, with a standard deviation of 1.89), and **items pooled** (*M*=21.82 *versus M*=28.17, with a standard deviation of 8.85), while in modifiers more masculine gender than feminine gender was used (*M*=7.71 *versus M*=2.29, with a standard deviation of 2.92). The Paired Sample *T*-

Test for significance revealed that difference reached significance level in the categories of **noun-titles**, **modifiers**, **verbs**, and **items pooled** (Table 8T).

TABLE 8T. CHISINAU STUDY AREA
Paired Samples Test

		Paired Differences Mean	Sd	Std. Error Mean	99% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	NOUN-TITLES MASC - NOUN-TITLES FEM	-4.5843	12.7286	1.3492	-8.1366	-1.0319	-3.398	88	.001
Pair 2	MODIFIERS MASC - MODIFIERS FEM	5.4157	5.8481	.6199	3.7836	7.0478	8.737	88	.000
Pair 3	VERBS MASC - VERBS FEM	-7.1910	3.7745	.4001	-8.2444	-6.1376	-17.973	88	.000
Pair 4	ITEMS POOLED MASC - ITEMS POOLED FEM	-6.3596	17.6984	1.8760	-11.2989	-1.4202	-3.390	88	.001

Paired Samples Statistics for the Edmonton study area (Appendix A, Table 15) indicated that the mean values of the use of masculine were lower than the mean values of the use of feminine only in the category of **verbs** (*M*=1.19 *versus* M=8.81, with a standard deviation of 1.74), while in **noun-titles** (*M*=15.39 *versus* *M*=14.60, with a standard deviation of 6.96), **modifiers** (*M*=8.51 *versus* M=1.48, with a standard deviation of 2.15), and items pooled (*M*=25.09 versus *M*=24.91, with a standard deviation of 8.32) more masculine gender than feminine gender was used. The Paired Sample *T*-Test for significance revealed that difference reached significance level only in two categories: **modifiers** and **verbs** (Table 9T).

Paired Samples Statistics for the Krasnoyarsk study area (Appendix A, Table 16) indicated that the mean values of the use of masculine were lower than the mean values of the use of feminine in **noun-titles** (*M*=13.58 *versus* M=16.42, with a

TABLE 9T. EDMONTON STUDY AREA
Paired Samples Test

		Paired Differences Mean	SD	Std. Error Mean	99% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	NOUN-TITLES - NOUN-TITLES FEM	.7863	13.9505	1.2897	-2.5913	4.1640	.610	116	.543
Pair 2	MODIFIERS - MODIFIERS FEM	7.0256	4.3041	.3979	5.9836	8.0677	17.656	116	.000
Pair 3	VERBS - VERBS FEM	-7.6239	3.4833	.3220	-8.4673	-6.7806	-23.675	116	.000
Pair 4	ITEMS POOLED MASC- ITEMS POOLED FEM	.1880	16.6340	1.5378	-3.8393	4.2154	.122	116	.903

standard deviation of 5.57), **verbs** (*M*=1.76 *versus* *M*=8.24, with a standard deviation of 1.69), and **items pooled** (*M*=21.81 *versus* *M*=28.19, with a standard deviation of 6.86), while in modifiers more masculine gender than feminine gender was used (*M*=6.65 *versus* *M*=3.35, with a standard deviation of 2.32). The Paired Sample *T*-Test for significance revealed that difference reached significance level in the categories of **noun-titles, modifiers, verbs,** and **items pooled** (Table 10T).

TABLE 10T. KRASNOYARSK STUDY AREA
Paired Samples Test

		Paired Differences Mean	Sd	Std. Error Mean	99% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	NOUN-TITLES MASC- NOUN-TITLES FEM	-2.8395	11.1349	1.2372	-6.1041	.4251	-2.295	80	.024
Pair 2	MODIFIERS MASC- MODIFIERS FEM	3.2927	4.6334	.5117	1.9429	4.6424	6.435	81	.000
Pair 3	VERBS MASC - VERBS FEM	-6.4819	3.3726	.3702	-7.4582	-5.5057	-17.510	82	.000
Pair 4	ITEMS POOLED MASC- ITEMS POOLED FEM	-6.3750	13.7209	1.5340	-10.4241	-2.3259	-4.156	79	.000

Paired Sample Tests, comparing the use of masculine gender versus feminine for specific study areas, revealed significant differences in 4 categories of the study, which were generally consistent with the differences observed for all areas combined together. The data from this part of analysis indicates that the differences in responses of participants were similar in the areas of Moscow, Chisinau and Krasnoyarsk. The Minsk area was consistent with the above-mentioned areas in all pairs of data except **noun-titles** (no significant difference of masculine versus feminine was achieved). The Edmonton area was consistent with all the rest only in the categories of **modifiers** and **verbs**, and differed in the categories of **items pooled** and in **noun-titles** in which there was no significant differences in this area. Results from this section of analysis contribute to confirmation of Hypothesis 3, i.e., that important differences would be observed in different study areas. The results of this section are also consistent with Panov's (1968) findings. Although his selection of study areas was different, the results of his analysis also pointed to distinctions in gender differentiation in titles between Russia proper and Ukraine and other Soviet republics.

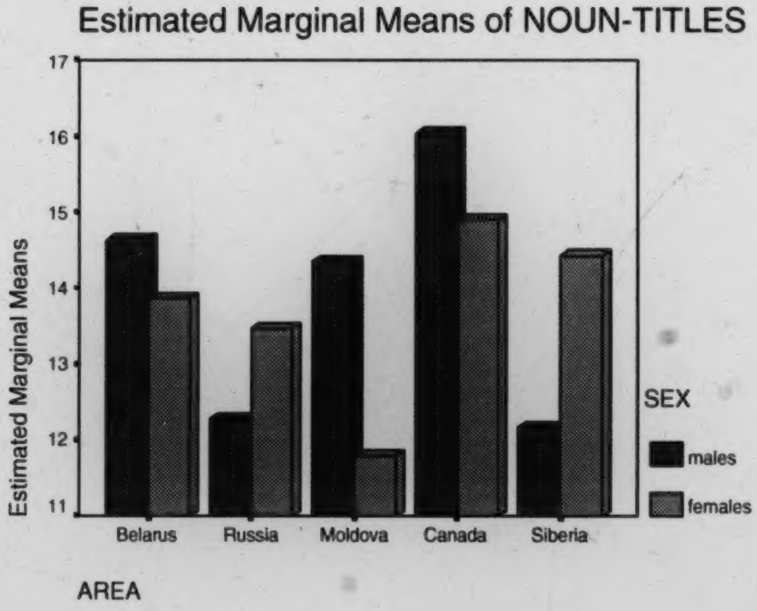
4.2.3. Sex of participants

According to the data of the Descriptive Statistics (Appendix A, Table 7), 170 males and 308 females took part in the experiment. The comparison of mean values (Appendix A, Table 17) indicates that male participants used more masculine gender than female participants, in all areas taken together, in the category of **noun-titles** *M*=14.26, sd= 6.41 versus *M*=13.71, sd=6.05, **verbs** (*M*=1.48, sd=1.90 versus *M*=1.36, sd=1.67), and **items pooled** (*M*=23.35, sd=8.18 versus *M*=22.88, sd=7.53). In the category of **modifiers**, however, the mean of the use of masculine gender for males was lower (*M*=7.61, sd=2.64) than in for females (*M*=7.81, sd=2.49).

Comparison of means for the use of masculine gender in different areas (Appendix A, Table 18) indicates that there was substantial variation of data.

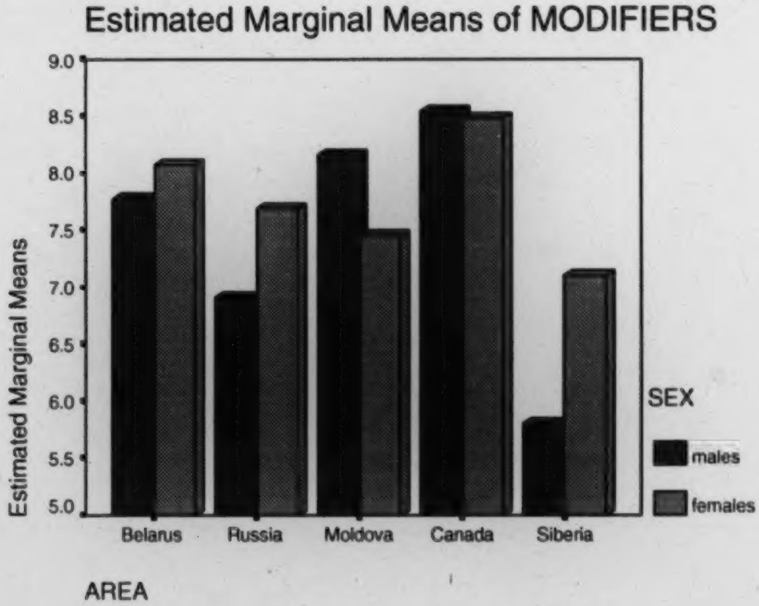
In the category of **noun-titles** (Plot 5), in three study areas (Belarus, Moldova, and Canada) male participants used more masculine gender (cf. Belarus: *M*=14.62, sd=5.49 versus *M*=13.86, sd=5.91; Moldova: *M*=14.34, d=6.54 versus *M*=11.78, sd=6.13; Canada: *M*=16.04, sd=7.15 versus *M*=15.39, sd=6.97). On the other hand in two other areas, namely European Russia and Eastern Siberia, females used more masculine gender (cf. European Russia: *M*=13.49, sd=5.48 versus *M*=12.29, sd=5.73; Eastern Siberia: *M*=14.43, sd=5.38 versus *M*=12.16, sd=5.73). Thus, in the areas where the influence of a foreign language existed, mean values for the use of masculine in the responses of males were higher than in the areas with less influence of foreign languages. It is also interesting to note that the difference of means for the use of masculine was quite considerable in the Chisinau study area. Total means of masculine in this category (Appendix A, Table 18), indicated that the highest score obtained for participants from Canada (*M*=15.39, sd=6.97) who were followed by participants from Belarus (*M*=14.12, sd=5.75), Siberia (*M*=13.55, sd=5.59), Russia (*M*=13.19, sd=5.53), and Moldova (*M*=12.72, sd=6.36).

PLOT 5. SEX



Observation of Estimated Marginal Means in the category of **modifiers** (Plot 6), reveals a picture that is substantially different from the one for **noun-titles**. Female participants from Belarus, European Russia and Eastern Siberia used more masculine gender than male participants (cf. Belarus: *M*=8.07, sd=2.73 *versus* *M*=7.77, sd=2.04; Russia: *M*=7.68, sd=2.60 versus *M*=6.90, sd=3.43; Siberia: *M*=7.10, sd=2.07 versus *M*=5.80, sd=2.52). At the same time male participants in the remaining two area, i.e., Moldova and Canada, used more masculine gender (cf. Moldova: *M*=8.15, sd=2.54 *versus* *M*=7.45, sd=3.11; Canada: *M*=8.55, sd=2.20 versus *M*=8.48, sd=2.12). Let us note that differences in mean values in the use of masculine in this category were quite pronounced in Eastern Siberia and European Russia, i.e., in the areas with less influence of western foreign languages. Total means (Appendix A, Table 18) indicated that the highest mean for the use of masculine was observed in Canada (*M*=8.51, sd=2.15) and the lowest in Eastern Siberia (*M*=6.60, sd=3.23) while the total means in the other three areas where almost equal.

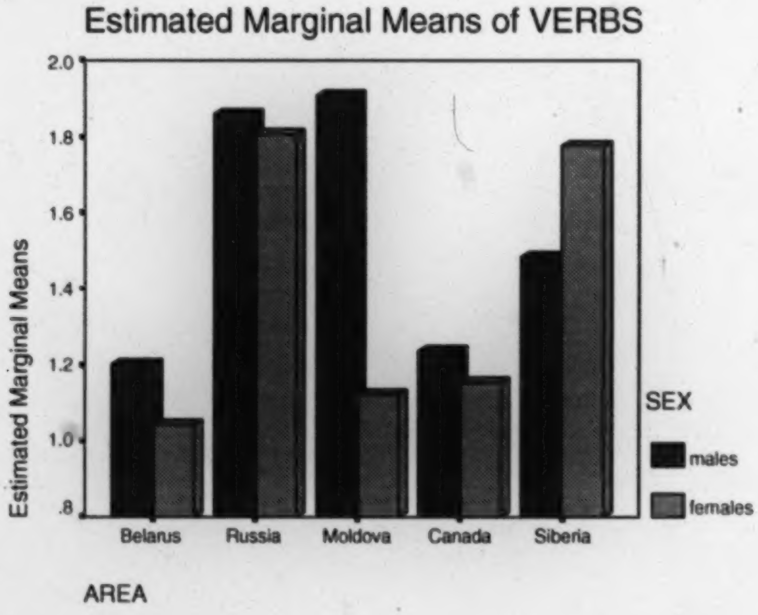
PLOT 6. SEX



1 In the category of **verbs** (Plot 7), in all study areas except Eastern Siberia the means of the use of masculine for male participants are higher than those for females. In Belarus, Russia, and Canada the differences in means of males and females are quite insignificant, while in Moldova we may observe a definite contrast (cf. *M*=1.91, sd=2.34 for males and *M*=1.12, sd=1.52 for females; the difference of means is, however is less than 1.00). The total means for **verbs** in masculine in different areas indicated that the highest value was obtained in Moscow (*M*=1.82, sd=1.81) while the lowest in Minsk (*M*=1.09, sd=1.65).

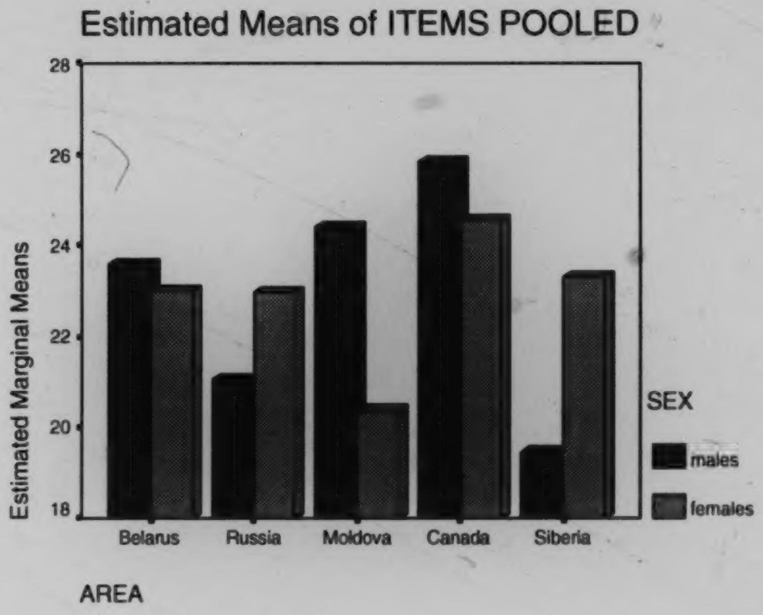
Observation of means in the category of **items pooled** (Plot 8), reveals a picture that is similar to the one for noun-titles: in three study areas (Belarus, Moldova, and Canada) male participants used more masculine gender (cf. Belarus: *M*=23.60, sd=6.75 *versus* *M*=22.98, sd=6.38; Moldova: *M*=24.40, d=8.87 *versus* *M*=20.36, sd=8.57; Canada:

PLOT 7. SEX



M=25.82, sd=8.45 *versus M*=24.53, sd=8.22). In European Russia and Eastern Siberia, females used more masculine gender (cf. European Russia: *M*=22.97, sd=7.51 *versus M*=21.01, sd=7.69; Eastern Siberia: *M*=23.30, sd=6.15 *versus M*=19.45, sd=7.34). Thus, in the areas where the influence of a foreign language existed, mean values for the use of masculine in the responses of males were higher than in the areas with less influence of foreign languages. It is also interesting to note that the difference of means for the use of masculine was quite considerable in the Chisinau and Krasnoyarsk study areas. The total means of masculine in this category (Appendix A, Table 18), indicated that the highest score was obtained for participants from Canada (*M*=25.39, sd=8.31) who were followed by participants from Belarus (*M*=23.19, sd=6.48), Russia (*M*=22.51, sd=7.55), Moldova (*M*=21.82, sd=8.84), and Siberia with the lowest mean (*M*=21.81, sd=6.86).

PLOT 8. SEX



As may be observed from the data above, the differences in pairs of corresponding means in most of the cases are minimal, and consequently it is very unlikely that any significant difference will be achieved.

Multivariate Analysis of variance (Appendix A, Table 19) revealed that there was indeed no significant difference between MALES and FEMALES (factor of SEX) on the set of four variables (**noun-titles**, **modifiers**, **verbs**, and **items pooled** (F=1.005, df=3, p<0.512). However, there were significant differences between AREAS on the same set of variables (F=4.501, df=12, p<0.001). In addition, Multivariate Analysis for this section indicated there was no interaction of two factors, i.e., SEX and AREA (F=1.226, df=12, p>0.259)

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for all examined variables, i.e., masculine **noun-titles**, **modifiers**, **verbs** and **items pooled** (Appendix A, Table 20).

The Bonferroni Post hoc tests revealed the existence of significant differences between AREAS on masculine **noun-titles**, **modifiers**, **verbs** and **items pooled** (Table 11T). In the category of **noun-titles**, participants from Edmonton used significantly more masculine gender than participants from Chisinau. In the category of **modifiers**, participants from Krasnoyarsk used significantly less masculine gender than participants from Edmonton, Minsk, and Chisinau. In addition participants from Edmonton used significantly more masculine gender than participants from Moscow. In the category of **verbs**, participants from Minsk used significantly less masculine gender than participants from Moscow. Finally, for **items pooled**, participants from Edmonton used significantly more masculine gender than participants from Chisinau and Krasnoyarsk. These results are consistent with the results of the analysis when only study areas were compared without correlation with other social factors.

TABLE 11T. SEX BY AREA.
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
NOUN-TITLES	Canada	Moldova	2.6853	.8591	.019	.2624	5.1082
MODIFIERS	Belarus	Siberia	1.3712	.3671	.002	.3358	2.4065
	Russia	Canada	-1.0126	.3483	.038	-1.9952	-3.0408
	Moldova	Siberia	1.1079	.3803	.038	3.522	2.1805
	Canada	Siberia	1.9128	.3581	.000	.9028	2.9229
VERBS	Belarus	Russia	-.7220	.2514	.043	-1.4312	-1.2876
ITEMS POOLED	Moldova	Canada	-3.2738	1.0724	.024	-6.2985	-.2491
	Canada	Siberia	3.2815	1.1062	.032	.1617	6.4013

Based on observed means.
The mean difference is significant at the .05 level.

Thus, although comparison of Estimated Marginal Means indicated that there were differences of responses in males and females, these differences did not achieve a significant level, and the factor of sex may not be considered significant for the choice of masculine versus feminine gender (Hypothesis 4).

4.2.4. Age

For this portion of the analysis, it was decided to test the influence of the age factor in two ways.

4.2.4.1. Age as a continuum

First, the age factor was viewed as a continuum. The analysis was conducted for all study areas combined together, and in each study area separately.

The analysis for all study areas (Table 12T) combined indicated that Pearson Product-Moment Correlations were significant at the 0.01 level (2-tailed) in two sets of data: **noun-titles** (r=-0.439), and **items pooled** (r=-0.332).

TABLE 12T. AGE AS CONTINUUM

Correlations

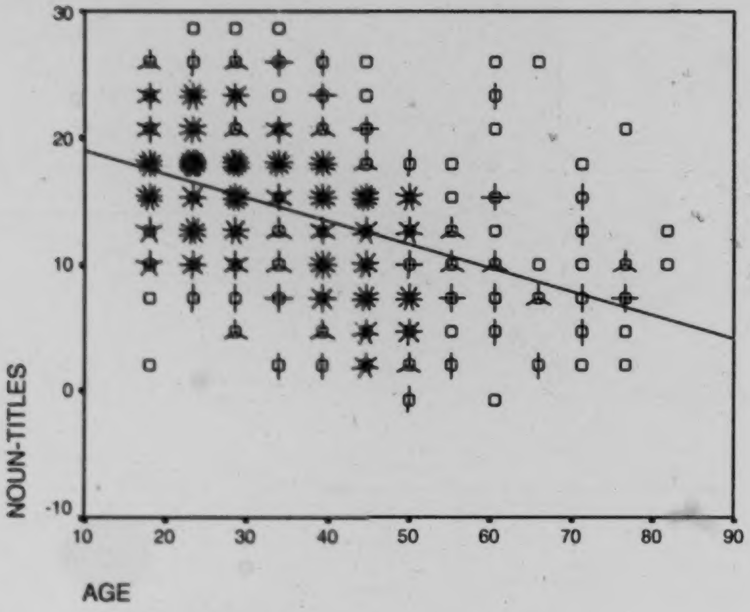
		AGE	NOUN-TITLES	MODIFIERS	VERBS	ITEMS POOLED
AGE	Pearson Correlation	1.000	-.439**	.080	-.055	-.332**
	Sig. (2-tailed)	.	.000	.079	.229	.000
	N	481	479	480	481	478

** Correlation is significant at the 0.01 level (2-tailed).

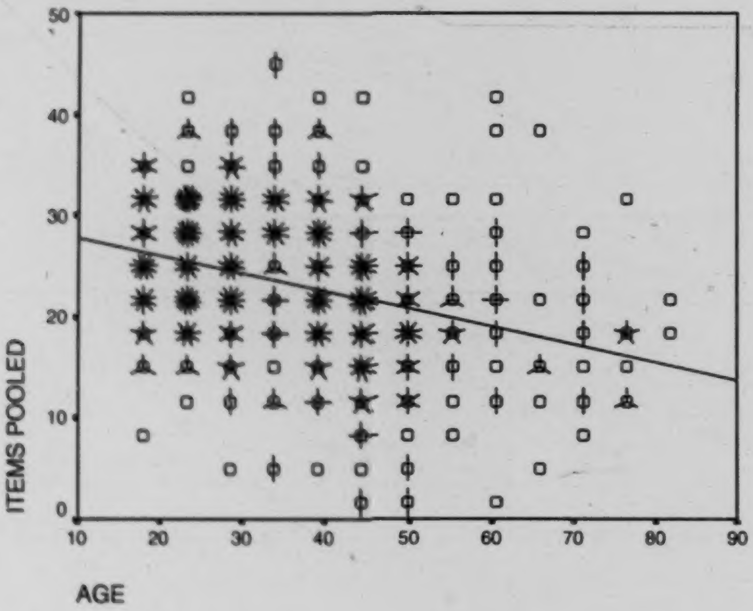
These results indicate that the older participants were, the more feminine gender for **noun-titles** and **items pooled** they used. The data is displayed in graphic form on Plots 9 and 10.

Note that each "petal" represents a participant in the experiment; a single participant is represented by a "circle". The solid line on the plot is automatically generated by the SPSS computer program. The direction of its slope and the angle between it and the horizontal axis shows what kind of trend exists, and how marked this trend is.

PLOT 9. AGE AS CONTINUUM



PLOT 10. AGE AS CONTINUUM

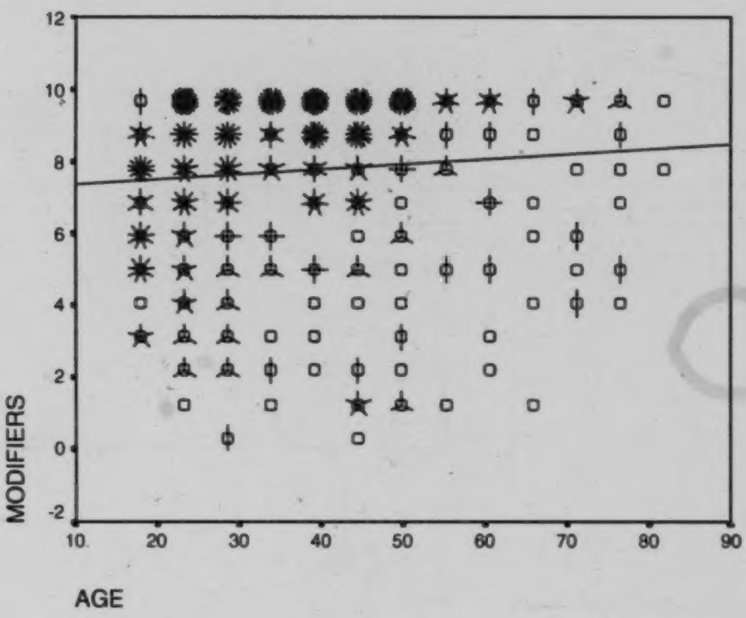


No significant differences were obtained in the other two categories. However, we may notice that the older participants were, the less feminine gender - to a slight degree - they used in the category of **modifiers** (Plot 11).

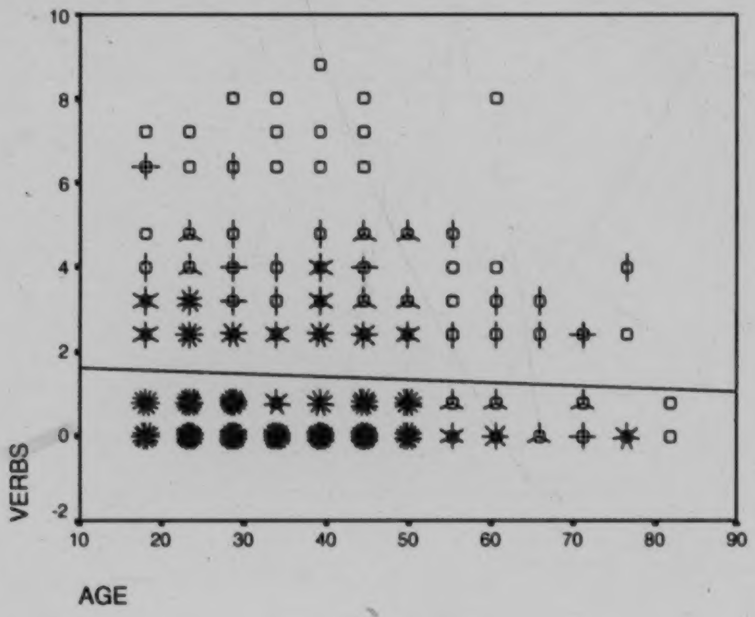
In the category of **verbs**, on the contrary, the older participants were, the fewer feminine forms - to a slight degree - they used. However, the differences between younger and older participants were minimal (Plot 12).

These results lead us to the conclusion that age factor is significant in gender differentiation of **noun-titles**. However, the influence of this factor in the choice of gender in **modifiers** and **verbs** is almost negligible, according to the data collected for the present research.

PLOT 11. AGE AS CONTINUUM



PLOT 12. AGE AS CONTINUUM



Pearson Product-Moment Correlations in the Minsk study area (Table 13T) also showed significance differences in two sets of data similarly to the results for all study areas taken together: **noun-titles** (r= -0.660), and **items pooled** (r=-0.530), i.e., older participants used significantly less masculine gender.

TABLE 13T. AGE AS CONTINUUM
Correlations: Minsk area

		AGE	NOUN-TITLES	MODIFIERS	VERBS	ITEMS POOLED
AGE	Pearson Correlation	1.000	-.660**	.182	-.024	-.530**
	Sig. (2-tailed)	.	.000	.064	.806	.000
	N	104	104	104	104	104

** Correlation is significant at the 0.01 level (2-tailed).

Pearson Product-Moment Correlations in the Moscow study area (Table 14T) revealed the significant level of difference only one category: older participants used significantly less masculine gender in **noun-titles** (r=-0.390).

TABLE 14T. AGE AS CONTINUUM

Correlations: Moscow area

		AGE	NOUN-TITLES	MODIFIERS	VERBS	ITEMS POOLED
AGE	Pearson Correlation	1.000	-.390**	.128	.140	-.204
	Sig. (2-tailed)	.	.000	.233	.192	.057
	N	88	88	88	88	88

** Correlation is significant at the 0.01 level (2-tailed).

In the Edmonton area (Table 15T) the results showed significant differences in correlations of the data for three categories: older participants used significantly less masculine for **noun-titles** (r=0.491), **verbs** (r=-0.187), and **items pooled** (r=– 0.413).

TABLE 15T. AGE AS CONTINUUM

Correlations: Edmonton area

		AGE	NOUN-TITLES	MODIFIERS	VERBS	ITEMS POOLED
AGE	Pearson Correlation	1.000	-.499**	.173	-.187**	-.413**
	Sig. (2-tailed)	.	.000	.062	.044	.000
	N	117	117	117	117	117

** Correlation is significant at the 0.01 level (2-tailed).

Finally, in the Krasnoyarsk area (Table 16T), correlations were significant in three categories: older participants used significantly less masculine gender in **noun-titles** (r=-0.626), in **modifiers** (r=-0.286), and **items pooled** (r=0.584).

TABLE 16T. AGE AS CONTINUUM

Correlations: Krasnoyarsk area

		AGE	NOUN-TITLES	MODIFIERS	VERBS	ITEMS POOLED
AGE	Pearson Correlation	1.000	-.626**	-.286**	.032	-.584**
	Sig. (2-tailed)	.	.000	.009	.772	.000
	N	83	81	82	83	80

** Correlation is significant at the 0.01 level (2-tailed).

In the Chisinau study area (Table 17T), no significant differences were observed in the correlations of 4 sets of data.

TABLE 17T. AGE AS CONTINUUM

Correlations: Chisinau area

		AGE	NOUN-TITLES	MODIFIERS	VERBS	ITEMS POOLED
AGE	Pearson Correlation	1.000	-.186	.094	-.121	-.129
	Sig. (2-tailed)	.	.081	.383	.259	.229
	N	89	89	89	89	89

** Correlation is significant at the 0.01 level (2-tailed).

The results from this portion of the analysis confirm that the factor of age is primarily important in the category of **noun-titles** (it was significant in all study areas except Moldova). The trend to use more grammatical agreement in verb-noun coordination in the younger generation was observed in the Edmonton study area more than in other locations, while in the Krasnoyarsk study area the trend for agreement by meaning prevailed in the older generation in **modifiers**. The data from this section of analysis allows us to confirm Hypothesis 5 (importance of the factor of age) partially, i.e., primarily in **noun-titles**, and give more evidence in support of Hypothesis 3 (influence of the factor of location).

4.2.4.2. Age by intervals

To compare the use of gender in various age groups, the analysis was conducted with participants split into groups. In the initial stage, six age groups were chosen: Group 1 – participants between 16 and 25, Group 2 – participants between 26 and 35, Group 3 – participants between 36 and 45, Group 4 – participants between 46 and 55, Group 5 – participants between 56 and 65, and Group 6 all the remaining participants. The distribution of numbers of participants in each group was as follows: 131 for Group1, 100 for Group2, 116 for Group 3, 79 for Group 4, 25 for Group 5 and 27 for Group 6 (Appendix A, Table 21).

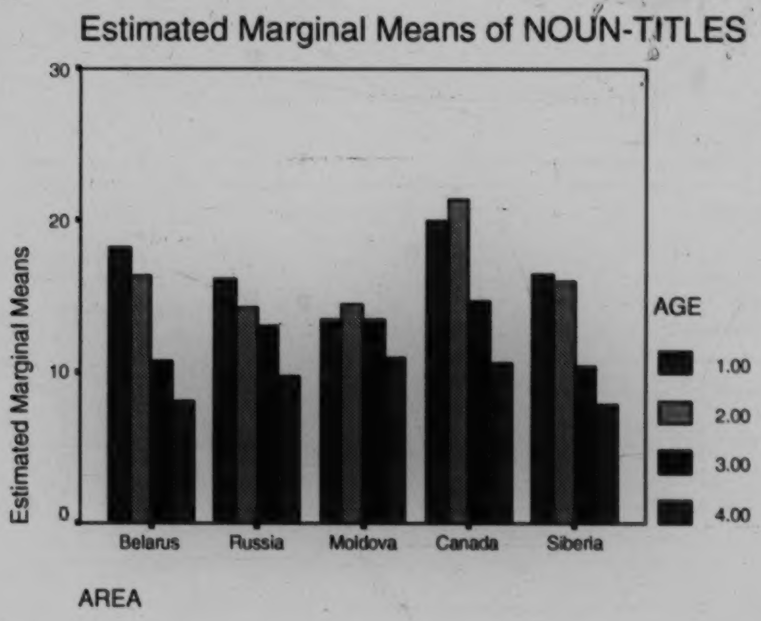
The data from Descriptive Statistics, however, revealed that in some study areas there very few participants in certain age groups (in the age group of 56 and older) to fill the required numbers of respondents per cell (at least 5), to conduct valid multivariate *t*-tests by area and four groups of items. Thus it was decided to combine Groups 4, 5, and 6 into one, which allowed balancing the numbers of cases in each age group and making the statistical analysis more reliable. In the new set-up, Group 4 comprised participant of the age 46 and older with total number of 131. (Appendix A, Table 22).

The Descriptive Statistics (Appendix A, Table 23) show, in the mean values, that the use of the masculine gender decreased with age in **noun-titles** and **items pooled** quite consistently. For all study areas taken together total means for **noun-titles** showed the following trend: 16 to 25 – *M*=16.91, sd=4.72, 26 to 35 – *M*=16.61, sd=5.46, 36 to 45 – *M*=12.80, sd=5.76, and 45 and older – *M*=9.81, d=5.75. In total means for **items pooled**, age group 16 to 25 had a value of *M*=25.63, sd=6.09, group 26 to 35 had a slightly higher mean of *M*=25.69, sd=7.59, age group of 36 to 45 had a mean of *M*=22.52, sd=7.38, and participants of 45 and older had a mean of *M*=18.91, sd=7.89. Totals for **modifiers** differed slightly: 16 to 25 – *M*=7.26, sd=2.34, 26 to 35 – *M*=7.72, sd=2.66, 36 to 45 – *M*=8.22, sd=2.36, and 46 and older – *M*=7.81, sd=2.75. The same trend, i.e., little variation of mean values in age groups, was observed in the category of **verbs**: 16 to 25 – *M*=1.46, sd=1.66, 26 to 35 – *M*=1.36, sd=1.79, 36 to 45 – *M*=1.51, sd=1.95, and 45 and older – *M*=1.29, sd=1.63.

However, in certain study areas some vacillations in the overall trend were documented, which will be evident in the comparison of Profile Plots.

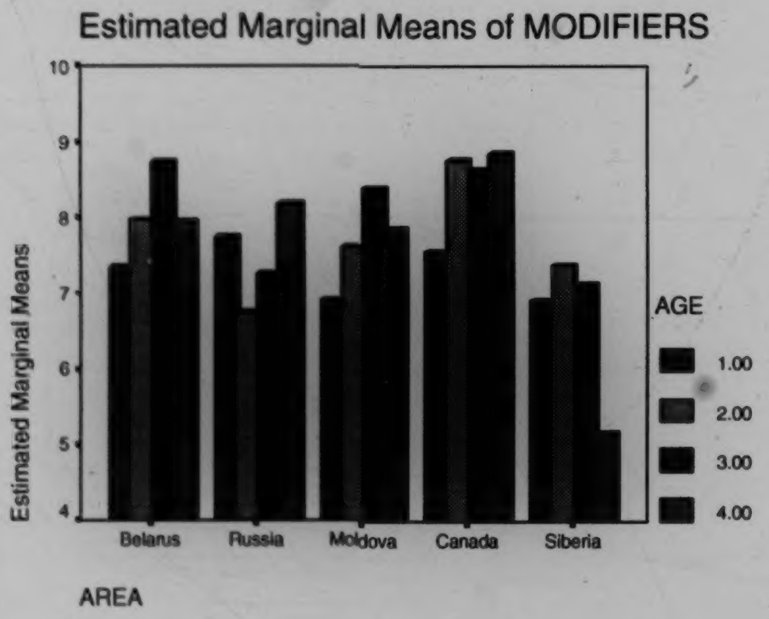
The graphical representation of Estimated Marginal Means for **noun-titles** plotted for various age groups and areas (Plot 13) reveals that the decrease of the use of the masculine gender with the increased age factor is observed very consistently in 3 study areas: Minsk (Group 1 – *M*=18.15, sd=4.19, Group 2 – *M*=16.33, sd=3.61, Group 3 – *M*=10.66, sd=4.81, and Group 4 – *M*=8.00, sd=4.55), Moscow (*M*=16.09, sd=5.06, *M*=14.26, sd=4.62, *M*=13.00, sd=5.77, and *M*=9.74, sd=4.75, respectively), and Krasnoyarsk (*M*=16.42, sd=3.22, *M*=15.95, sd=5.11, *M*=10.38, d=5.45 and *M*=7.80, d=4.23, respectively). In Canada, the 26-35 age group scored more (*M*=21.45, sd=3.22) than the 16-25 group (*M*=19.91, 3.88). In Moldova, the 26-35 age group had the highest score (*M*=14.47, sd=8.06) followed by the 36-45 age group and the 16-25 age group, which had almost equal means (*M*=13.48, sd=5.42 *versus* *M*=13.43, sd=5.57) and the older participants (*M*=10.91, sd=6.41). Let us also note that in Belarus, Canada and Eastern Siberia there is a considerable gap in means between the two younger groups of participants and two older groups. Participants of 46 years of age and older in all study areas, and in the 36-45 age group in all areas except Moldova obtained consistently lower means than for other age groups.

PLOT 13. AGE BY INTERVALS



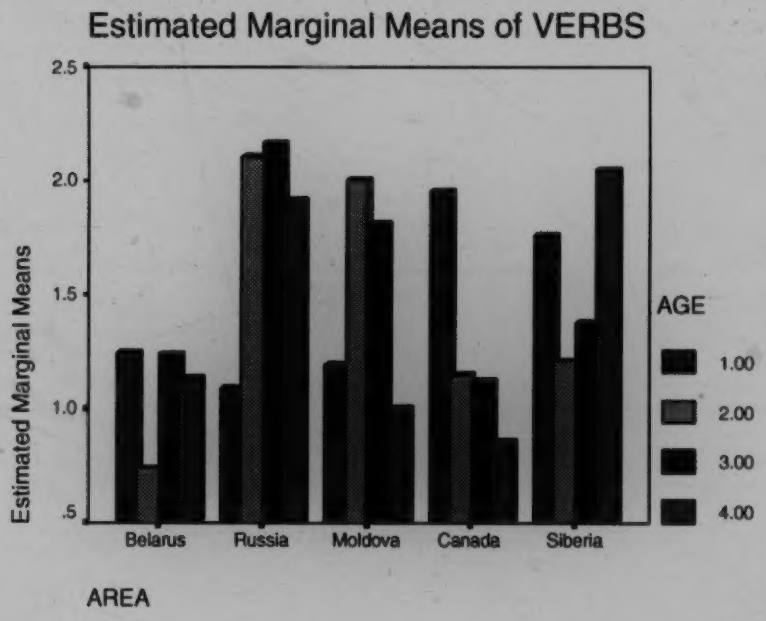
The plot of Estimated Marginal Means for **modifiers** (Plot 14) displays a considerable difference between the areas. In Belarus and Moldova, the 36-45 age group gained the highest scores of masculine (*M*=8.72, sd=1.43 and *M*=8.38, d=2.67, respectively), while the 16-25 age group – the lowest (*M*=7.33, sd=2.23 and *M*=6.90, sd=2.45, respectively) with the 26-35 age and 46+ age groups being almost on the same level (*M*=7.96, sd=2.43 and *M*=7.93, sd=2.63 for Belarus, and *M*=7.60, sd=3.07 and *M*=7.84, sd=3.28 for Moldova). In Moscow, the highest score of the masculine forms was observed for the oldest age group (*M*=8.17, sd=2.50), followed by the youngest age group (*M*=7.73, sd=2.64), and then by the 36-45 age group (*M*=7.25, sd=2.79) and the 26-35 age group (*M*=6.73, sd=3.38). In Canada, the 46+ age group had more masculine forms (*M*=8.83, sd=1.89), and was followed by the 26-35 age group (*M*=8.75, sd=2.15), the 36-45 age group (*M*=8.62, d=2.03), and finally by the 16-25 age group (*M*=7.55, sd=2.61). In Siberia, the 26-35 age group scored highest means (*M*=7.37, sd=2.09), and was followed by the 36-45 age group (*M*=7.13, sd=3.36), the 16-25 age group (*M*=6.91, sd=2.02), and finally by the 46+ group (*M*=5.15, d=2.06). Note that participants from Siberia in the 46+ age group obtained a mean for masculine which is much lower than in other areas in any age group. Such variety and inconsistency of the results in this section may confirm the previous conclusion that the age factor does not play a significant role in choice of gender for **modifiers**.

PLOT 14. AGE BY INTERVALS



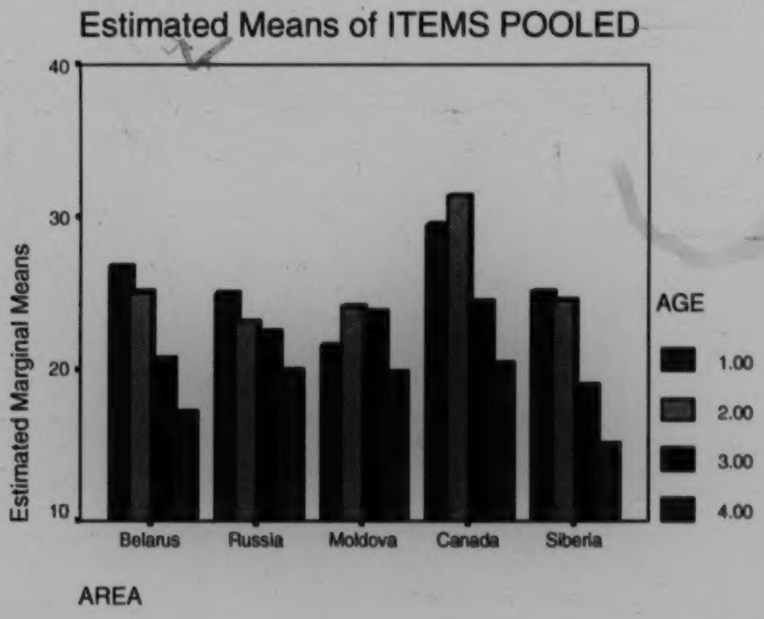
The same confusing picture can be observed in Estimated Marginal Means for **verbs**. In Belarus, the 16-25 and 36-45 age groups scored virtually the same mean values (M=1.24, sd=1.58 and 1.35), and were followed by the 46+ age group (*M*=1.13, sd=2.26), and then by the 26-35 age group (*M*=0.74, sd=1.65). In Moscow, the 36-45 age group had the highest mean (*M*=2.16, sd=2.18), and was followed by the 26-35 age group (*M*=2.11, sd=2.13), the 46+ age group (*M*=1.91, sd=1.35), and finally by the youngest participants (*M*=1.09, sd=1.37). In Moldova, the highest mean value was in the 26-35 age group (*M*=2.00, sd=2.48), followed by the 36-45 age group (*M*=1.80, sd=2.42), the 16-25 age group (*M*=1.19, sd=1.21), and finally by the oldest participants (*M*=1.00, sd=1.46). In Krasnoyarsk, the oldest participants scored the highest means for the use of masculine (*M*=2.05, sd=1.50), and were followed by the youngest age group (*M*=1.76, sd=1.64), and then by the 35-46 age group (*M*=1.37, sd=2.07), and finally by the 26-35 age group (*M*=1.21, sd=1.22). Only for participants in Canada, the increase in age was consistent with the decreased use of masculine forms (*M*=1.95, sd=2.26, *M*=1.15, sd=1.14, *M*=1.12, sd=1.82, and *M*=0.85, sd=1.53). Again, such results lacking consistency may confirm the previous observation that the age factor does not significantly influence the choice of gender in verbs.

PLOT 15. AGE BY INTERVALS



For **items pooled** (Plot 16), Belarus (Group 1- *M*=26.73, sd=5.09, Group 2 – *M*=25.04, sd=5.78, Group 3 – *M*=20.62, sd=5.74, and Group 4 – *M*=17.07, sd=5.69), Russia (*M*=24.91, sd=6.77, *M*=23.11, sd=7.95, *M*=22.42, sd=8.11, and *M*=19.83, sd=6.93, respectively) and Siberia (*M*=25.09, sd=4.75, *M*=24.53, sd=5.83, *M*=18.88, sd=6.03, and *M*=15.00, sd=5.77, respectively) display a consistent decrease in the use of masculine gender with the increase of age. In Moldova, however, the highest index for the use of the masculine gender was achieved by the 26-35 age group (*M*=24.07, sd=11.38), followed by the 36-45 age group (*M*=23.67, sd=8.13), and then by the 16-25 age group (*M*=21.52, sd=6.50) and after that by participants of 46 years and older (*M*=19.75, sd=9.19). In the Edmonton area, the 26-35 age group scored more for the masculine gender (*M*=31.35. sd=4.69) than the 16-25 age group (*M*=29.41, sd=5.89) with two others groups following after (*M*=24.38, sd=7.56 and *M*=20.32, sd=8.44, respectively). The overall trend is generally consistent with the one for **noun-titles**.

PLOT 16. AGE BY INTERVALS



Multivariate Analysis of variance (Appendix A, Table 24) revealed that there was a significant difference between AGE GROUPS on the set of four variables (**noun-titles, modifiers, verbs**, and **items pooled** (F=17.302, df=9, p<0.001). In addition, there were significant differences between AREAS on the same set of variables (F=5.554, df=12, p<0.001). Multivariate Analysis for this section also indicated there was significant interaction of two factors, i.e., AGE and AREA (F=2.209, df=36, p>0.001).

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for all the examined variables, i.e., masculine **noun-titles, modifiers, verbs** and **items pooled,** and differences between AGE GROUPS were significant only in **noun-titles** and **all-items** (Appendix A, Table 25). In addition, the analyses revealed significant interaction of two factors, i.e., AREAS and AGE, in **noun-titles, modifiers** and **items pooled**.

The Bonferroni Post hoc tests display significant differences between AREAS on masculine **noun-titles, modifiers, verbs** and **items pooled** (Table 18T). In the category of **noun-titles**, participants from Edmonton used significantly more masculine gender than participants from Chisinau. In the category of **modifiers**, participants from Krasnoyarsk used significantly less masculine gender than participants from Edmonton, Minsk, and Chisinau. In addition participants from Edmonton used significantly more masculine gender than participants from Moscow. In the category of **verbs**, participants from Minsk used significantly less masculine gender than participants from Moscow. Finally, for **items pooled**, participants from Edmonton used significantly more masculine gender than

TABLE 18T. AGE BY AREA
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
NOUN-TITLES	Russia	Canada	-2.2000	.7305	.027	-4.2606	-.1394
	Moldova	Canada	-2.6853	.7282	.003	-4.7393	-.6313
MODIFIERS	Belarus	Siberia	1.3712	.3639	.002	.3446	2.3977
	Russia	Canada	-1.0128	.3453	.035	-1.9869	-.03876
	Moldova	Siberia	1.1079	.3770	.035	.04434	2.1714
	Canada	Belarus	.5417	.3298	1.000	-.3886	1.4720
VERBS	Belarus	Russia	-.7220	.2499	.040	-1.4270	-.01704
ITEMS POOLED	Moldova	Canada	-3.2738	.9849	.010	-6.0519	-.4956
	Canada	Siberia	3.2815	1.0159	.013	.4160	6.1470

Based on observed means.
The mean difference is significant at the .05 level.

participants from Chisinau and Krasnoyarsk. These results are consistent with the results of the analysis when only study areas were compared not correlated to other social factors.

The Bonferroni Post hoc tests display significant differences between AGE GROUPS on masculine **noun-titles**, and **items pooled** (Table 19T). In both categories, the 16-25 age group used significantly more masculine gender than the 36-45 and the 46+ age groups; the 26-35 age group used significantly more masculine forms than the 36-45 and group 46+ groups; the 36-45 age group used significantly more masculine than the 46+ age group, and consequently, the 46+ age group used more feminine forms than all other groups. In both cases, there was no significant difference between the two younger generations.

TABLE 19T. AGE BY INTERVALAS
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AGE	(J) AGE				Lower Bound	Upper Bound
NOUN-TITLES	1.00	3.00	4.1067	.6600	.000	2.3577	5.8556
		4.00	7.0992	.6397	.000	5.4042	8.7943
	2.00	3.00	3.8083	.7065	.000	1.9363	5.6802
		4.00	6.8008	.6875	.000	4.9792	8.6225
	3.00	4.00	2.9926	.6600	.000	1.2436	4.7415
ITEMS POOLED	1.00	3.00	3.1001	.8928	.003	.7345	5.4657
		4.00	6.7176	.8652	.000	4.4249	9.0102
	2.00	3.00	3.1641	.9555	.006	.6322	5.6961
		4.00	6.7816	.9299	.000	4.3177	9.2455
	3.00	4.00	3.6175	.8928	.000	1.2518	5.9831

Based on observed means.
The mean difference is significant at the .05 level.

The data from Multivariate tests and observations of Estimated Marginal Means indicate that age is a significant factor in the choice of gender for **noun-titles**. These results are consistent with those obtained in the preliminary experiment. In addition, the data from the present study also allows us to claim more definitely, as compared to the results obtained by Panov and Krysin, that participants from all age groups differ in the use of masculine gender in **noun-titles**, and that the use of masculine forms is significantly higher in younger people. The results also allow us to postulate that the use of masculine gender in **modifiers** and **verbs** seems to depend on other factors than age. Hence, Hypothesis 5 (importance of age factor) finds only a partial confirmation in the results of this section of analysis.

4.2.5 Duration of residence in Canada

The participants in Edmonton, besides providing data similar to other study areas, also indicated the duration of their residence in Canada. It seems reasonable to predict that long-term dwelling in Canada, and exposure to the English language, may influence speakers' use of the Russian language. In particular, since there are very few cases of gender distinction of occupational titles in English (e.g., actor-actress) and no gender distinction in modifiers and preterit verbs, we may expect that those who lived in Canada for a long period of time will use less feminine gender in Russian.

Pearson Product-Moment Correlations (Table 20T) revealed that this factor was indeed significant. However, for **noun-titles**, people with longer residence in Canada used fewer masculine forms (r=-0.239). The same tendency was also observed in the category of **modifiers** (r=-0.232), and for **items pooled** (r=-0.243). No significant difference was observed in the use of **verbs**. Thus, although this research revealed that participants from Edmonton used more masculine gender in some categories, the expected increase of masculine in connection with longer period of residence in Canada was not obtained. On the contrary, those who lived longer in this country tend to use less masculine. The only explanation for this would appear to be the influence of other social factors, primarily age, since the longer people lived in Canada the older they were. It is plausible to predict that older immigrants' Russian language habits were established long ago, and that they were less affected by the influence of English than the younger generation. Thus, it may have been more instructive to compare the groups of participants of the same age: those with extended residence in Canada and those who were not exposed extensively to the influence of English. The present research did not allow us to do that because it seemed to be impossible to form such groups using age and residence parameters obtained from the participants of the present study. At the same time, comparison of the study areas of the present study indicated that residence in Canada influenced the choice of gender whereby more masculine was used in virtually all categories.

TABLE 20T. DURATION OF RESIDENCE IN CANADA

		CANADIAN RESIDENCE	NOUN-TITLES	MODIFIERS	VERBS	ITEMS POOLED
CANADIAN RESIDENCE	Pearson Correlation	1.000	-.239	-.232	.085	-.243
	Sig. (2-tailed)	.	.009	.012	.361	.008
	N	117	117	117	117	117

** Correlation is significant at the 0.01 level (2-tailed).

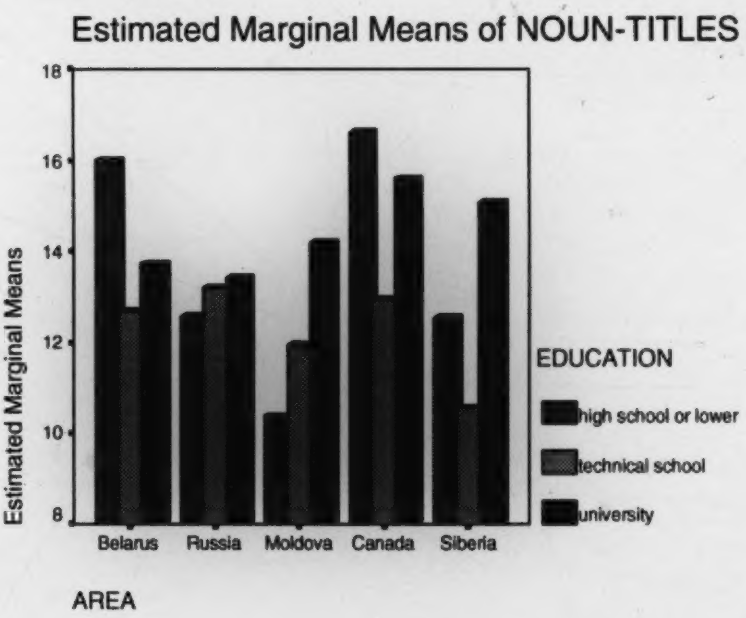
4.2.6 Education

In the initial set-up of the analysis, all participants were divided into 4 groups with regard to their level of education. For all areas combined together, people with high school level or lower constituted a group of 120 people, with technical school education – 85, non-completed university (or institute) – 33, and those with the university (or institute) degree or higher – 240. (Appendix A, Table 26). The Descriptive Statistics, however, revealed that in some areas particular cells for multivariate analysis were not filled to an appropriate level (at least 5 participants). Therefore, the initial arrangement had to be changed, and the category of non-completed university was combined with the category of completed university degree (the total number for this group now being 273, see Appendix A, Table 27) allowing an adequate amount of participants per cell.

The new Descriptive Statistics data (Appendix A, Table 28) indicated that there was considerable variation in mean values in different areas and in different categories. Generally, we may claim, however, that participants with a higher level of education obtained higher means for the use of masculine gender. Total mean values for all areas in **noun-titles** indicated that participants with the level of education of high school and lower had a mean of M=13.60, sd=6.56, technical school level – M=12.48, sd=5.88, and completed and non-competed university – M=14.48, d=6.04. The same tendency was observed for **modifiers**. In total for 5 areas, responses from participants with high school level of education or lower had a mean value of *M*=5.26, sd=2.54, technical school – *M*=7.80, sd=2.11, and completed and non-completed university – *M*=8.81, sd=1.81. In **verbs**, however, the mean values were practically the same for all levels of education (*M*=1.46, sd=1.68, for high school level and lower, *M*=1.37, sd=1.65, for technical school level, and *M*=1.39, sd=1.81, for completed and non-completed university). Finally, totals for **items pooled** were distributed in the following way: high school and lower, *M*=20.31, sd=8.11, technical school, *M*=21.65, sd=6.97, and university (including non-completed university), *M*=24.68, sd=7.43. It is interesting to note that in totals for **noun-titles** people with the technical school level of education scored less for masculine gender than participants with the high school level and lower. This can be attributed to the influence of other important sociological factors, i.e., primarily, age. In different areas, however, the mean values for three education groups varied substantially; this will be discussed below.

The graphical representation of Estimated Marginal Means in the 5 study areas for **noun-titles** (Plot 17) shows a considerable difference among the areas (see also Appendix A, Table 28). Only in two areas, in Moscow and Moldova, the mean values for the use of masculine consistently increased with a higher level of education (cf. in Moscow: high school, *M*=12.56, sd=4.83, technical school, *M*=13.18, sd=5.79, and university, *M*=13.40, d=5.72, and in Moldova: *M*=10.37, sd=6.03, *M*=11.94, sd=5.63 and *M*=14.19, d=6.50, respectively). Note that while in Moscow the difference in means was quite small, in Chisinau it is quite considerable. On the other hand, in Minsk and Edmonton, participants with only high school education scored more masculine forms than those with university and technical school education (cf. in Minsk: high school – *M*=16.00, sd=6.50, technical school *M*=12.68, sd=4.33, and university – *M*=13.72, sd=5.67, and in Edmonton, respectively: *M*=16.62, sd=7.00, *M*=12.94, sd=8.08 and *M*=15.59, sd=6.68. In Krasnoyarsk, participants with university level of education obtained the highest mean of *M*=15.08, sd=4.73, and were followed by those with high school level (*M*=12.53, sd=6.22), and then by those with technical school education (*M*=10.56, sd=5.25). Reviewing of the Plot 17 also allows us to see the striking difference in means for participants with a high school level of education between the areas. While in Belarus and Canada the means are at high level, they are very low in Chisinau with Moscow and Krasnoyarsk being at some intermediate level. This phenomenon probably reflects the influence of other social factors, such as age (see Section 4.2.4). It seems that younger participants in two areas where the external language influence to use more masculine is more pronounced, i.e., Edmonton and Minsk, contrast with young participants form Chisinau, where the substratum language (Moldavian) clearly differentiates masculine and feminine gender in titles.

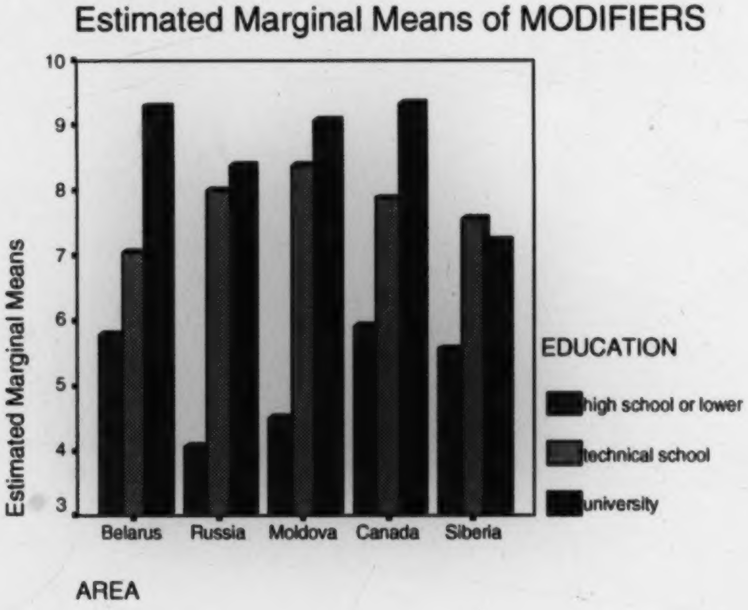
PLOT 17. EDUCATION



The data for **modifiers** (Plot 18) shows that Estimated Marginal Means of the use of masculine gender increased with higher education quite consistently in all areas with the exception of Krasnoyarsk. In Belarus, the distribution of means was as follows: high school – *M*=5.77, sd=1.99, technical school – *M*=7.05, sd=2.22, university – *M*=9.29, sd=1.01. In Moscow, high school level acquired the mean of *M*=4.06, sd=2.91, technical school – *M*=8.00, sd=1.93, and university – *M*=8.38, d=2.28. In

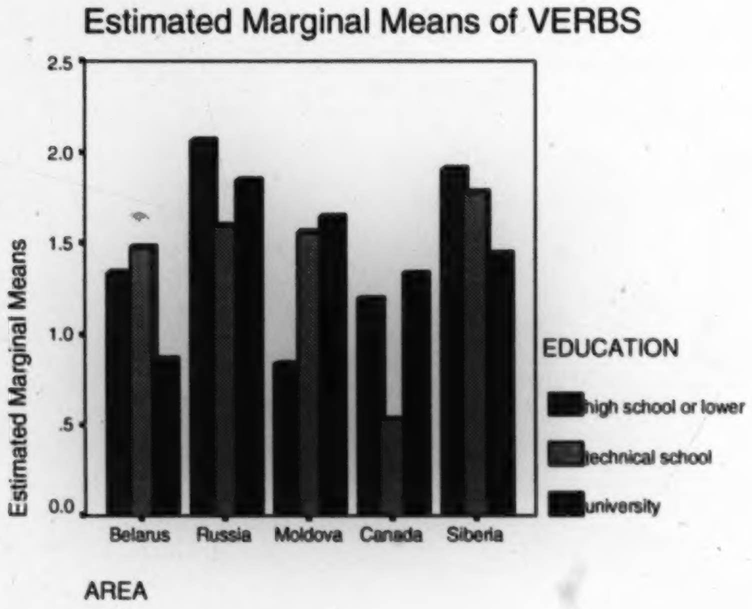
Moldova, the mean value for high school level constituted *M*=4.50, sd=2.98, for technical school level – *M*=8.39, sd=1.94, and *M*=9.09, sd=1.74 for university level. In Canada, high school level obtained the mean of *M*=5.90, sd=2.17, technical school – *M*=7.88, sd=2.34, and university – *M*=9.34, sd=1.39. In the Krasnoyarsk area, however, the mean value for technical school education was slightly higher than that for university level (*M*=7.55, sd=2.18 *versus* *M*=7.23, sd=1.97). Inspection of the bars on the plot also reveals a quite considerable gap between the means for technical school and university levels and high school and lower level. This allows us to predict that the use of feminine gender in modifiers is definitely associated with the level of education of high school and lower.

PLOT 18. EDUCATION



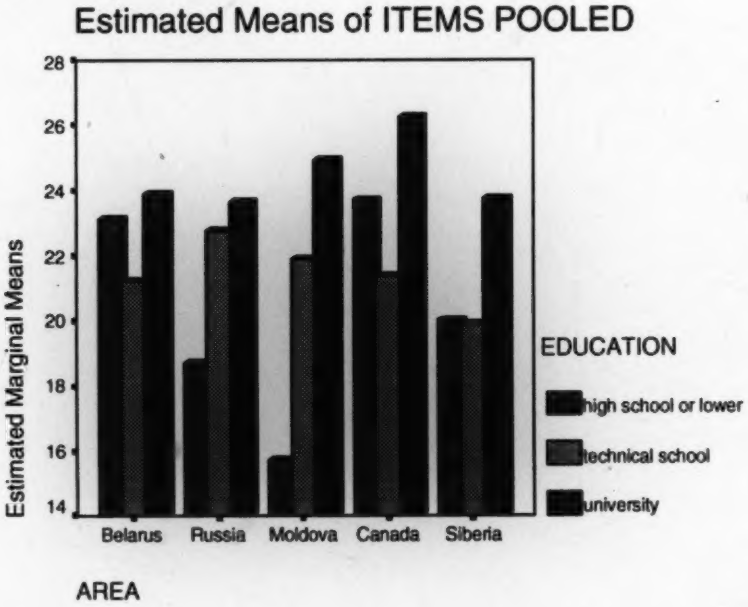
The data of Estimated Marginal Means for **verbs** (Plot 19) display quite a confusing picture although the difference of mean values lies only within an interval of 0.6 to 2.0. In three study areas (Belarus, Moldova and Siberia) participants with high school education had higher means of masculine than participants with university education, while in two other areas (Moldova and Canada) the tendency was reversed. Taking this into consideration, we are inclined to say that the education factor does not play a vivid role in this category.

PLOT 19. EDUCATION



In the category of **items pooled** (Plot 20), the use of the masculine gender increased with higher education quite consistently for the areas of Moscow (high school – *M*=18.69, sd=7.02, technical school – *M*=22.77, sd=6.57, university - *M*=23.62, sd=7.86), Moldova (*M*=15.71, sd=7.37, *M*=21.89, sd=7.09, and *M*=24.91, sd=8.65, respectively) and Krasnoyarsk (in the latter case, the groups of high school and technical school scored basically equal means: *M*=20.00, sd=7.91 and *M*=19.89, d=5.01, while the mean for university was higher than the other two - *M*=23.74, sd=5.83). However, in Belarus the means for participants with only high school education scored more than for those with technical school education (*M*=23.11, sd=7.59 *versus* *M*=21.21, sd=5.56), and participants with university education scored more masculine forms (*M*=23.88, sd=6.18). The same picture was observed in Canada: university – *M*=26.26, sd=7.81, technical school – *M*=21.35, sd=9.67, and high school – *M*=23.71, sd=8.31. It is worthwhile noting here that the difference in means due to the education level is strikingly more pronounced for the area of Moldova than for other areas.

PLOT 20. EDUCATION



Multivariate Analysis of variance (Appendix A, Table 29) revealed that there was a significant difference between EDUCATION LEVELS on the set of four variables (**noun-titles**, **modifiers**, **verbs**, and **items pooled** (F=35.3463, df=6, p<0.001). In addition, there were significant differences between AREAS on the same set of variables (F=2.806, df=12, p<0.001). Multivariate Analysis for this section also indicated there was significant interaction of these two factors, i.e., EDUCATION LEVEL and AREA (F=2.459, df=24, p<0.001).

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for all the examined variables, i.e., masculine **noun-titles**, **modifiers**, and **verbs**, and differences between EDUCATION LEVELS were significant only in **noun-titles**, **modifiers**, and **items pooled** (Appendix A, Table 30).

In addition, the analyses revealed significant interaction of two factors, i.e., AREAS and EDUCATION LEVEL, in **noun-titles**, and **modifiers**.

The Bonferroni Post hoc tests display significant differences between AREAS on masculine **noun-titles**, **modifiers**, and **verbs** (Table 21T). In the category of **noun-titles**, participants from Edmonton used significantly more masculine gender than participants from Chisinau. In the category of **modifiers**, participants from Krasnoyarsk used significantly less masculine gender than participants from Edmonton, Minsk, and Chisinau. In addition participants from Edmonton used significantly more masculine gender than participants from Moscow. In the category of **verbs**, participants from Minsk used significantly less masculine gender than participants from Moscow. These results (except for **items pooled**) are generally consistent with the results of the analysis when only study areas were compared and not correlated to other social factors

TABLE 21T. EDUCATION BY AREA
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
NOUN-TITLES	Moldova	Canada	-2.6853	.8529	.017	-5.0909	-.2797
MODIFIERS	Belarus	Siberia	1.3712	.2947	.000	.5398	2.2025
	Russia	Canada	-1.0128	.2797	.003	-1.8016	-.2240
		Siberia	.9000	.3062	.035	.03645	1.7635
	Moldova	Canada	-.8050	.2788	.041	-1.5912	-.01869
		Siberia	1.1079	.3053	.003	.2466	1.9691
	Canada	Siberia	1.9128	.2875	.000	1.1018	2.7238
VERBS	Belarus	Russia	-.7220	.2511	.042	-1.4304	-.01366

Based on observed means.
The mean difference is significant at the .05 level.

The Bonferroni Post hoc tests display significant differences between EDUCATION LEVELS on masculine **noun-titles**, **modifiers**, and **items pooled** (Table 22T). Thus, for **noun-titles**, articipants with non-completed and completed university education used more masculine titles than those with technical school education. For **modifiers**, participants with high school education and lower used significantly less masculine forms than those with technical school education and non-completed and completed university, and participants with technical school level of education used more masculine forms than those with only high school education or less, but fewer masculine forms than participants with non-completed and completed university. We may conclude that participants with completed and non-completed university used more masculine forms than the two other groups. No significant difference depending on the level of education was observed in the category of **verbs**. Finally, for **items pooled**, participants with technical school education used less masculine forms than those with completed and non-completed university, and participants with completed and non-completed university education used significantly more masculine forms than those with high school level of education or lower and consequently more than those with technical school level.

TABLE 22T. EDUCATION
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) EDUCATION	(J) EDUCATION				Lower Bound	Upper Bound
NOUN-TITLES	technical scho	university	-1.9975	.7532	.025	-3.8072	-.1878
MODIFIERS	high school	technical school	-2.5417	.2810	.000	-3.2168	-1.8666
		university	-3.5512	.2171	.000	-4.0728	-3.0296
	technical schoo	university	-1.0095	.2462	.000	-1.6010	-.4180
ITEMS POOLED	technical school	university	-3.0343	.9222	.003	-5.2501	-.8185
	university	high school	4.3647	.8132	.000	2.4107	6.3186

Based on observed means.
The mean difference is significant at the .05 level.

It is interesting to note that in **noun-titles** no significant difference was observed between people with secondary education and those with high school and lower. Again, we assume that this is due to the influence of other sociological factors, primarily age (see Section 4.2.4). The results of this portion of analysis also confirm the data from the preliminary experiment, which revealed that people with a higher level of education use fewer masculine **modifiers** than those with a lower level of education. Thus, Hypothesis 6 (influence of education level) is generally confirmed in this portion of analysis.

4.2.7 Social status

Defining social classes has always been a difficult task while conducting research with respect to the Former Soviet Union, for it is quite difficult to ignore the political doctrine of the Communist times. Officially, the whole population was grouped into two main classes: proletariat and collective farm workers with one other group of population defined as a *прослойка* ("layer"), i.e., the intelligentsia. The question then arises where to put all office workers who were, obviously, neither proletariat nor collective farm workers, and who could not all be considered intelligentsia. Meanwhile, they constituted a considerable portion of the population. Despite major changes in class divisions in the last decade, the question of defining society class structure in the republics of the former Soviet Union remains unclear.

Upon evaluation of the sociological data provided by the participants in the questionnaires, it was decided, for the purposes of the present study, to single out the following social groups: blue-collar workers, white-collar workers, and intelligentsia. Since the experiment was conducted only in urban locations, the category of rural inhabitants was outside the scope of study. It is also essential to note here that the factor of education plays an important role in establishing social groups. However, the level of education does not necessarily put a certain subject into a particular group. For example, people with the technical school certificate in Russia or other republics may fall into categories of both blue-collar workers and white collar workers, but most likely cannot be included in the group of intelligentsia. On the other hand, people with higher education can be regarded as white-collar workers or intelligentsia, but very seldom as blue-collar workers. The category of blue-collar workers in the present study was generally defined by the workplace (e.g., plant, garage, shop, etc.) and the position (e.g., laborer, driver, security guard, etc.) of a particular participant. The group of intelligentsia was arbitrarily defined as those who had university education, resided in urban areas all their lives, both of whose parents originated from urban areas and had higher education. All the rest, who defined their workplace as "office", or something similar, were defined as white-collar workers.

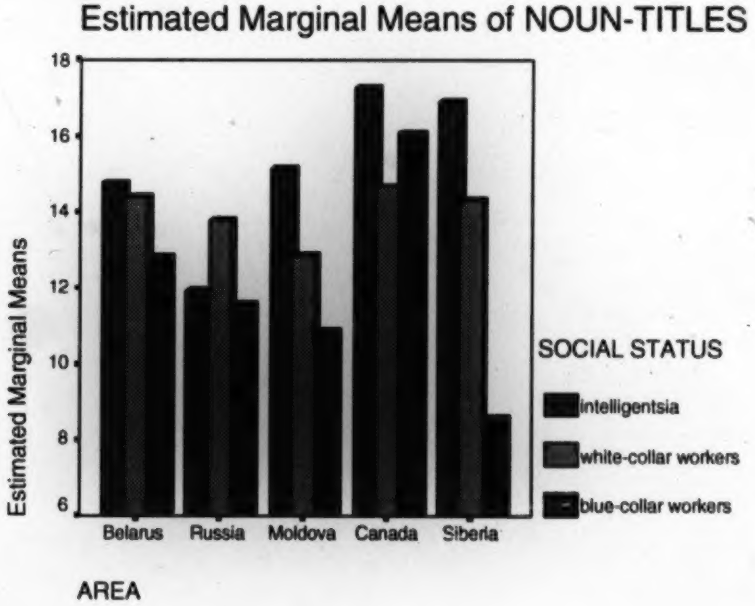
The statistics of frequencies for the present study indicated that 74 participants (15.4%) fell into the social group of blue-collar workers, 329 (68.4%) into the group of white-collar workers, and 78 (16.2%) into the groups of intelligentsia (Appendix A, Table 31). Although the group of white-collar workers constitutes the majority, it was still possible to conduct efficient statistical analysis because there were enough responses per cell.

The review of Descriptive Statistics (Appendix A, Table 32) reveals that, in general, the higher the social group, the more masculine gender is used by participants in all categories except **verbs.** In **noun-titles**, total means for all areas combined were distributed in the following way: intelligentsia, *M*=15.61, sd=6.37, white-collar workers, *M*=14.01, sd=5.87, and blue-collar workers, *M*=11.85, sd=6.76. Totals for **modifiers** had the following distribution: intelligentsia – *M*=9.02, sd=1.52, white collar workers, *M*=8.05 d=2.33, and blue-collar workers, *M*=5.23, sd=2.54. Variation of means in **verbs** women was quite insignificant (intelligentsia, *M*=1.24, sd=1.69, white-collar workers, *M*=1.37, sd=1.74, and blue-collar workers – *M*=1.66, sd=1.84). In total means for **items pooled**, intelligentsia acquired the mean of *M*=25.88, sd=6.93, white-collar workers, *M*=23.43, sd=7.46, and blue-collar workers, *M*=18.74, sd=8.07. It is interesting to note that in all categories except **verbs**, differences in means were less pronounced between intelligentsia and white-collar workers.

The mean values in the five study areas generally followed the trend, but some differences between the areas were observed.

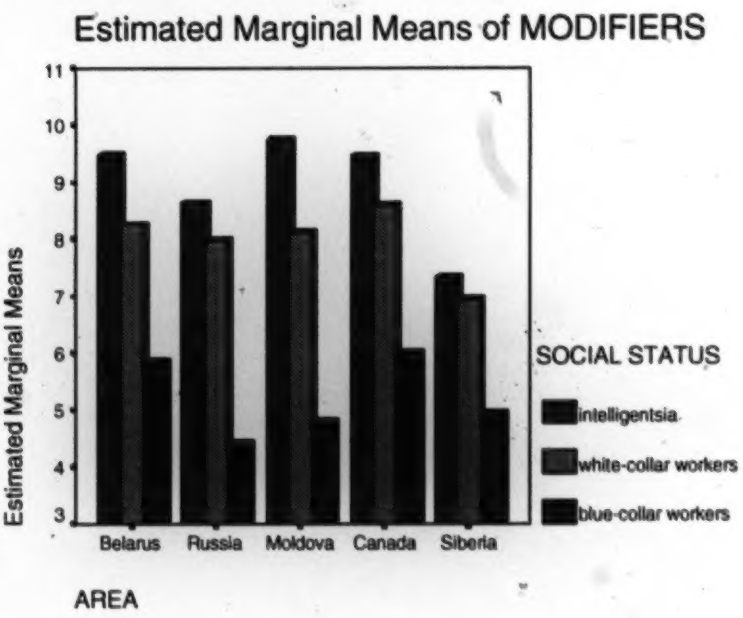
For the category of **noun-titles**, Estimated Marginal Means (Plot 21) show that in three areas the decline in the use of masculine forms was consistent with lower class group. Thus, in Belarus the distribution of means was as follows: intelligentsia – *M*=14.76, sd=6.33, white-collar workers – *M*=14.38, sd=5.51, and blue-collar workers – *M*=12.81, d=6.13. In Chisinau, the means distributed in the following way: intelligentsia – *M*=15.13, sd=7.53, white-collar workers – *M*=13.78, sd=5.53, and blue-collar workers – M=10.87, sd=6.70. In Eastern Siberia, the same trend was observed, but the difference of means between social groups is more pronounced: intelligentsia – M=16.92, sd=3.73, white-collar workers – M=14.31, sd=4.88, and blue-collar workers – M=8.56, sd=6.01. The means in Canada differed from the above areas because blue-collar workers here scored higher than white-collar workers (M=16.08, sd=8.40 *versus* M=14.67, sd=6.72) with intelligentsia gaining more than the other two (M=17.27, sd=6.96). This phenomenon may be explained by the fact that many immigrants, who had completed university education before coming to Canada and may have belonged to the social group of intelligentsia, were not able to find work in their field in this country, and had to find employment as blue-collar workers. In Moscow, white-collar workers scored more than intelligentsia (M=13.78, sd=5.52 versus M=11.91, sd=5.47) with the blue-collar workers being on the third place (M=11.57, sd=5.52).

PLOT 21. SOCIAL STATUS



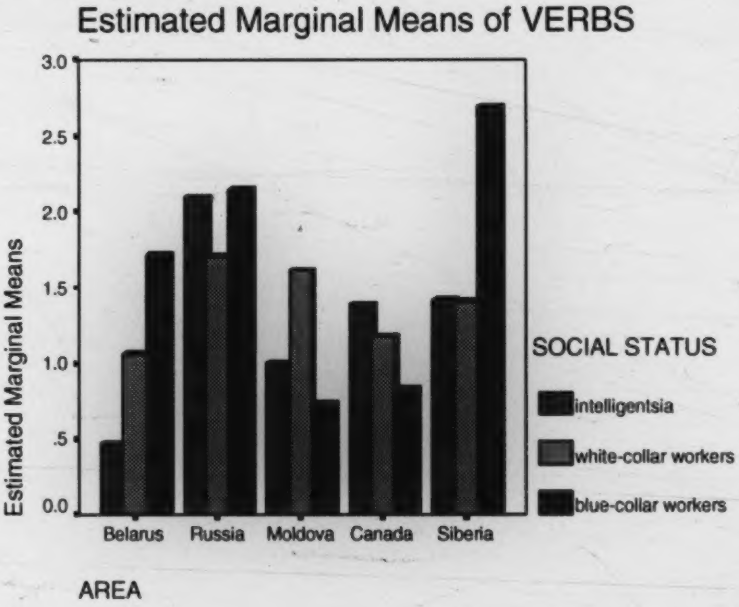
Means for **modifiers** displayed a very consistent picture. In all study areas means for masculine consistently declined with lower social status of participants. For intelligentsia Moldova scored the highest mean (*M*=9.75, sd=0.46), and was followed by Belarus (*M*=9.47, sd=0.87), Canada (*M*=9.46, sd=0.99), Moscow (*M*=8.64, sd=1.57), and Krasnoyarsk (*M*=7.33, sd=2.31. Means for white-collar workers 4 areas displayed quite similar values: Canada – *M*=8.58, sd=2.16, Belarus – *M*=8.26, sd=1.99, Moldova – *M*=8.12, sd=2.63, and Moscow – *M*=7.98, sd=2.54. Krasnoyarsk area displayed a lower mean than other areas – *M*=6.94, sd=2.08. Finally, for blue-collar workers, Canada was with the highest mean of *M*=6.00, sd=2.13, and was followed by Belarus (*M*=5.86, sd=2.13), Krasnoyarsk (*M*=4.94, sd=2.46), Chisinau (*M*=4.80, sd=3.05), and Moscow (*M*=4.43, sd=2.87).

PLOT 22. SOCIAL STATUS



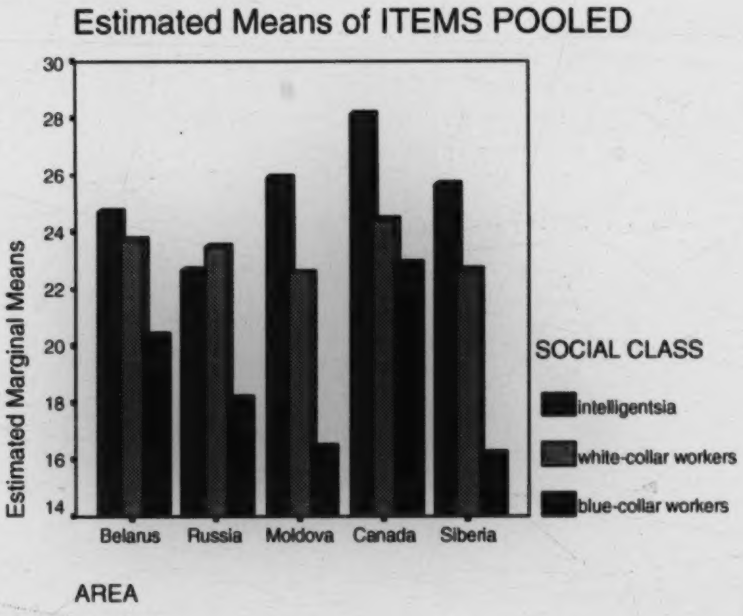
Estimated Marginal Means for **verbs** (Plot 23) show that there was a considerable difference between the 5 study areas. Only in Edmonton area mean values consistently declined from intelligentsia to blue-collar workers (*M*=1.38, sd=2.16, *M*=1.18, sd=1.69, and *M*=0.83, sd=0.94). In two areas, Krasnoyarsk and Belarus, the tendency was even reversed: *M*=1.42, sd=1.31, *M*=1.40, sd=1.39, *M*=2.68, sd=1.92 for Siberia, and *M*=0.47, sd=0.62, *M*=1.06, sd=1.60, and *M*=1.71, sd=2.15 for Belarus. In Moscow, blue-collar workers obtained the highest mean – *M*=2.14, sd=2.03, followed by intelligentsia and – *M*=2.09, sd=1.70, and white-collar workers – *M*=1.70, sd=1.80. In Moldova, white-collar workers had the highest score *M*=1.61, sd=2.05, while intelligentsia had the mean of *M*=1.00, sd=1.69, and blue-collar workers – *M*=0.73, sd=0.80. Although such a diverse picture was obtained in this category, we have to keep in mind that the difference of means was only within one and half points, and we can hardly talk of the influence of social group on the choice of gender in this category of data.

PLOT 23. SOCIAL STATUS



Finally, in **items pooled** (Plot 24) the picture is quite consistent for all areas except Moscow where participants of white-collar class obtained higher means than intelligentsia. The highest score of means for intelligentsia was found for Edmonton (*M*=28.11, sd=7.78), which was followed by Chisinau (*M*=25.88, sd=8.04), Krasnoyarsk (*M*=25.67, sd=3.92), Belarus (*M*=24.71, sd=6.60), and Moscow (*M*=22.64, sd=6.38). Means for white-collar workers were quite close in all areas (Edmonton – *M*=24.43, sd=8.19, Minsk – *M*=23.70, sd=6.00, Moscow – *M*=23.46, sd=7.65, Krasnoyarsk – *M*=22.65, sd=6.14, and Chisinau – *M*=22.56, sd=8.60). Means for blue-collar workers distributed in the following way: Canada – *M*=22.92, sd=9.27, Belarus – *M*=20.38, sd=7.34, Moscow – *M*=18.14, sd=6.87, Chisinau – *M*=16.40, sd=8.53, and Krasnoyarsk – *M*=16.19, sd=7.77). One may notice that in Moldova and Eastern Siberia differences in means for blue-collar workers were considerably lower than for the other two sets.

PLOT 24. SOCIAL STATUS



Multivariate Analysis of variance (Appendix A, Table 33) indicated that there was a significant difference between SOCIAL CLASSES on the set of four variables: **noun-titles, modifiers, verbs,** and **items pooled** (F=18.888, df=6, p<0.001). In addition, significant differences were observed between AREAS on the same set of variables (F=4.297, df=12, p<0.001). Multivariate Analysis for this section also indicated that there was significant interaction of two factors, i.e., SOCIAL STATUS and AREA (F=1.683, df=24, p<0.021).

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for all examined variables, i.e., masculine **noun-titles**, **modifiers**, and **verbs**, and **items pooled**, and differences between SOCIAL CLASSES were significant only in **noun-titles, modifiers,** and **items pooled** (Appendix A, Table 34). The analyses did not reveal significant interaction of two factors, i.e., AREAS and SOCIAL CLASS, in any sets of variables.

The Bonferroni Post hoc tests revealed the existence of significant differences between AREAS on masculine **noun-titles, modifiers, verbs** and **items pooled** (Table 23T). In the category of **noun-titles**, participants from Edmonton used significantly more masculine gender than participants from Chisinau. In the category of **modifiers**, participants from Krasnoyarsk used significantly less masculine gender than participants from Edmonton, Minsk, and Chisinau. In addition participants from Edmonton used significantly more masculine gender than participants from Moscow. In the category of **verbs**, participants from Minsk used significantly less masculine gender than participants from Moscow. Finally, for **items pooled**, participants from Edmonton used significantly more masculine gender than participants from Chisinau and Krasnoyarsk. These results are consistent with the results of the analysis when only study areas were compared not correlated to other social factors.

TABLE 23T. SOCIAL CLASS BY AREA
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
NOUN-TITLES	Moldov	Canada	-2.6853	.8482	.016	-5.0777	-.2929
MODIFIERS	Belar	Siberia	1.3712	.3300	.000	.4405	2.3018
	Russ	Canada	-1.0128	.3131	.013	-1.8959	-.1297
	Moldov	Siberia	1.1079	.3418	.013	.1437	2.0720
	Canad	Siberia	1.9128	.3219	.000	1.0049	2.8207
VERBS	Belarus	Russia	-.7220	.2494	.040	-1.4256	-1.8497
ITEMS POOLED	Moldov	Canada	-3.2738	1.0486	.019	-6.2315	-.3161
	Canad	Siberia	3.2815	1.0816	.025	.2308	6.3322

Based on observed means.
The mean difference is significant at the .05 level

The Bonferroni Post hoc tests display significant differences between SOCIAL CLASSES on masculine **noun-titles**, **modifiers**, and **items pooled** (Table 24T). In **noun-titles**, intelligentsia and white-collar workers used significantly more masculine titles than blue-collar workers. In the category of **modifiers**, intelligentsia and white-collar workers used significantly more masculine forms than blue-collar workers. For **items pooled**, intelligentsia used significantly more masculine forms than white-collar workers and blue-collar workers; white-collar workers used more masculine forms than blue-collar workers.

TALBE 24T. SOCIAL CLASS
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) SOCIAL CLASS	(J) SOCIAL CLASS				Lower Bound	Upper Bound
NOUN-TITLES	intelligentsia	blue-collar	3.7620	.9786	.000	1.4106	6.1133
	white-collar	blue-collar	2.1630	.7601	.014	.3367	3.9894
MODIFIERS	intelligentsia	white-collar	.9810	.2857	.002	.2945	1.6675
		blue-collar	3.7963	.3601	.000	2.9311	4.6614
	white-collar	blue-collar	2.8152	.2797	.000	2.1433	3.4872
ITEMS POOLED	intelligentsia	white-collar	2.4459	.9600	.033	.1392	4.7525
		blue-collar	7.1348	1.2098	.000	4.2279	10.0417
	white-collar	blue-collar	4.6889	.9397	.000	2.4310	6.9468

Based on observed means.
The mean difference is significant at the .05 level.

In conclusion for this section of analysis, we will note that multivariate tests and observations of mean values allow us to state that membership in a social class (as defined in the present study) influences the choice of masculine gender versus feminine. Lower social status was associated with less use of masculine gender in all categories except **verbs**, thus confirming Hypothesis 7. These results are generally consistent with those obtained by Krysin (1974) and Panov (1968), although these authors used slightly different division into social groups (viz., blue-collar workers, white-collar workers, technical, philological and humanitarian intelligentsia, students, and writers).

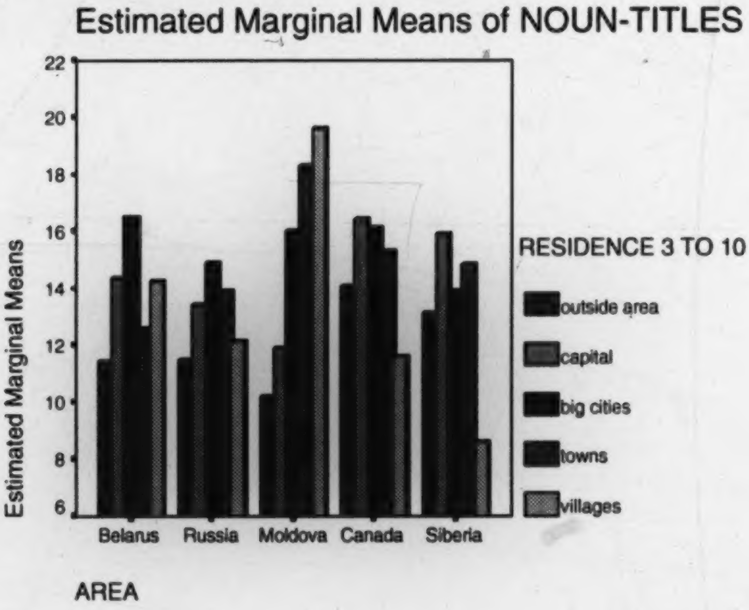
4.2.8. Residence from 3 to 10 years of age

Participants in the experiment, in their responses for sociological data in the questionnaires, provided quite varying information on their residence between the ages of 3 to 10. For all areas taken together, 74 participants indicated that when young they resided outside the area where they permanently lived the rest of their lives; 213 participants resided in the capital of the region; 68 in big cities of the same region; 66 in towns in the same area, and 53 in villages (Appendix A, Table 35). For Belarus the capital was, naturally, Minsk, for Moldova – Chisinau. For participants from Moscow the "outside" area was defined as all territories outside the European part of the Russian Federation. For participants from Krasnoyarsk, all territories outside the Krasnoyarsk area were considered "outside" areas, and Krasnoyarsk itself was regarded as the capital of the given area. For participants from Edmonton, the residence from 3 to 10 was correlated with the data for their longest residence in the former Soviet Union, and thus criteria for establishing what could be considered the capital of the region and "outside area" were developed. Most commonly, it was one of the former Soviet republics, and consequently the capital city was regarded as the 'capital' for the present study.

The Descriptive Statistics for this part of the research (Appendix A, Table 36) indicated that the mean values for the use of masculine were generally lower for those from "outside areas" as compared to the target area, and lower for smaller townships and settlements. Thus, total means for **noun-titles** distributed in the following way: "outside area" – M=11.91, sd=6.31, capital – M=14.08, sd=5.89, big cities – M=15.78, sd=5.79, towns M=14.74, sd=6.46, and villages M=12.38, sd=6.38. Totals for **modifiers** for all areas combined had a slight variation: "outside area" – M=7.28, sd=3.09, capital – M=7.83, sd=2.50, big cities – M=8.32, sd=2.21, towns – M=7.95, sd=2.12 and villages – M=6.98, sd=2.58. Very little variation in total means was observed for **verbs**: "outside area" – M=1.43, sd=1.87, capital – M=1.37, sd=1.84, big cities – M=1.35, sd=1.77, towns – M=1.29, sd=1.42, and villages – M=1.66, sd=1.59. For all areas in the category of **items pooled** the means distributed in the following way: "outside area" – *M*=20.62, sd=8.26, capital – *M*=23.29, sd=7.55, big cities – *M*=25.46, sd=7.13, towns *M*=23.98, sd=7.52, and villages – *M*=21.00, sd=7.92.

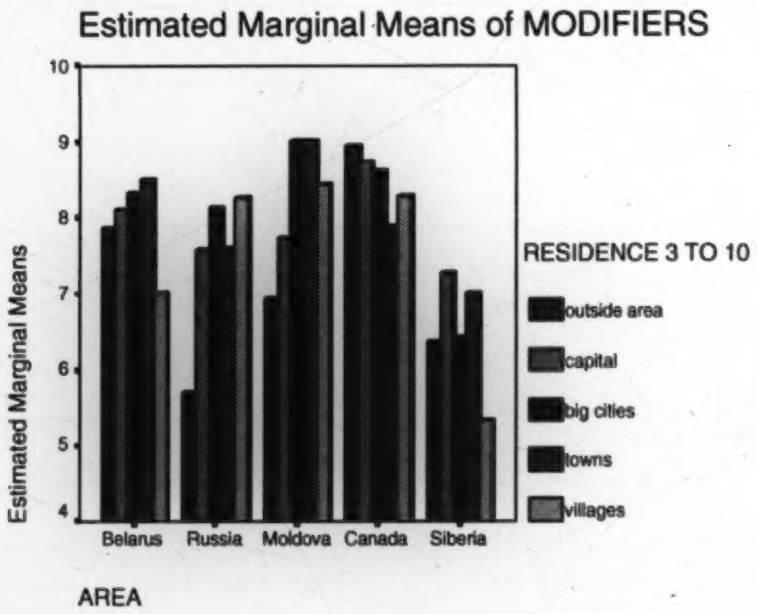
Certain differences were observed in the comparison Estimated Marginal Means of the study areas. In some of the cases the trends in study areas varied from the data for all areas combined. Thus, in **noun-titles** (Plot 25), the most apparent differences can be observed in Moldova area ("outside area" – *M*=10.18, sd=5.95, capital – *M*=11.88, sd=5.44, big cities – *M*=16.00, sd=7.21, towns – *M*=15.28, sd=4.57, villages – *M*=19.57, sd=7.09). In Siberia, villages scored considerably fewer masculine forms than other selections (*M*=8.61, sd=4.63 *versus* *M*=13.09, sd=4.66/"outside area", *M*=13.85, sd=5.27/big cities, *M*=14.80, sd=5.63/towns and *M*=15.88, sd=4.91/capital). In Belarus, European Russia and Moldova means for "outside area" were lower than other sets. In Canada and Eastern Siberia means for "villages" were much lower than means for other sets.

PLOT 25. RESIDENCE FROM 3 TO 10 (SET 1)



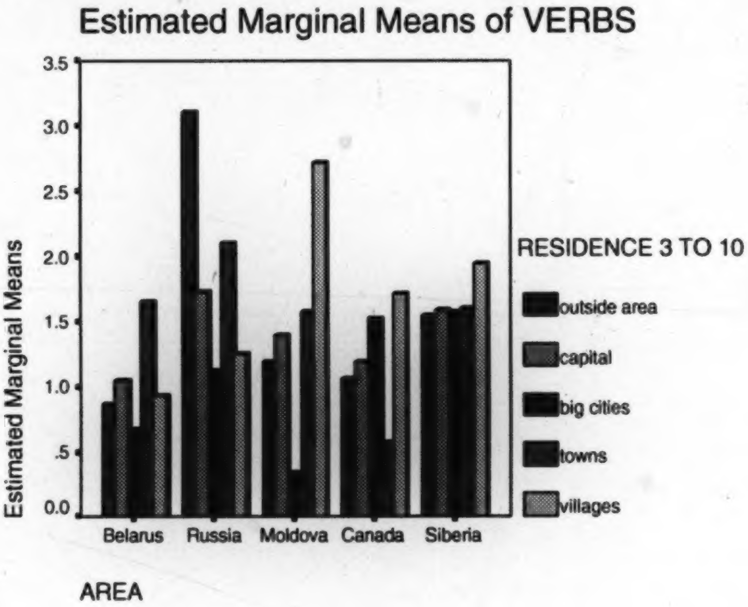
In **modifiers** (Plot 26), responses for Moscow area showed a considerable difference for the "outside area" as compared to all other sets (*M*=5.70, sd=4.16 *versus* *M*=7.58, sd=2.76/capital, *M*=8.13, sd=1.81/big cities, *M*=7.60, sd=2.75/towns and *M*=8.25, sd=2.38/villages). In Moldova, again, "outside area" scored less than other sets (*M*=6.93, sd=3.46 *versus* *M*=7.72, sd=2.87/capital, *M*=9.00, sd=1.00/big cities, *M*=9.00, sd=1.00/towns and *M*=8.42, sd=2.44 villages). In Belarus and Eastern Siberia means for "villages" are lower than means for all other sets. In addition to that, in Krasnoyarsk area almost all indices seem to be lower than in other areas, however, the "outside area" scored a little more than "villages" (*M*=6.36, sd=2.54 *versus* 5.33, sd=2.30).

PLOT 26. RESIDENCE FROM 3 TO 10 (SET 1)



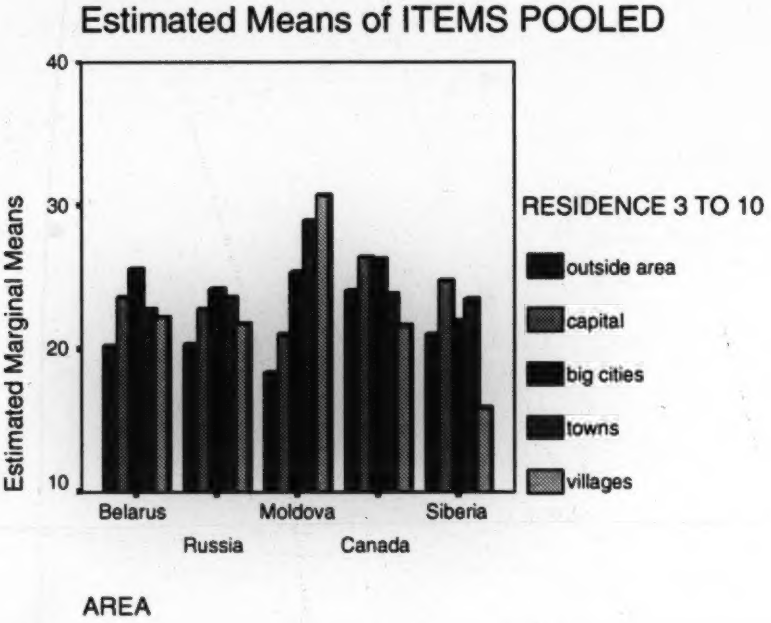
In **verbs** (Plot 27) responses in Belarus, Canada and Siberia areas differed slightly. In Moscow area, the mean for "outside area" was higher than for other sets (cf. *M*=3.10, sd=2.02 *versus* *M*=2.20, sd=2.28/towns, *M*=1.72, sd=1.77/capital, *M*=1.25, sd=1.35/villages and *M*=1.25, sd=1.35/big cities. In Moldova, "villages" scored more than other selections (cf. *M*=2.71, sd=1.80 *versus* *M*=0.33, d=0.58 for big cities). In three areas, i.e., Moldova, Canada and Eastern Siberia the means for "villages" were higher than for other sets.

PLOT 27. RESIDENCE FROM 3 TO 10 (SET 1)



In **items pooled** (Plot 28), means for "outside area" in Minsk, Moscow, and Moldova were lower than means for others sets. In Canada and Siberia, means for "villages" are lower than means for all other groups of data. In Moldova, participants who lived in villages between the ages of 3 to 10 obtained much higher means than participants from urban area: villages (*M*=30.71, sd=9.18) *versus* "outside areas" (*M*=18.29, sd=8.24), the capital (*M*=21.00, sd=8.37), big cities (*M*=25.33, d=6.11), towns (*M*=28.86, d=4.85).

PLOT 28. RESIDENCE FROM 3 TO 10 (SET 1)



Multivariate Analysis of variance (Appendix A, Table 37) indicated that there was a significant difference between LOCATIONS OF RESIDENCE FROM 3 T0 10 on the set of four variables: **noun-titles**, **modifiers**, **verbs**, and **items pooled** (F=4.764 df=4, $p<0.001$). In addition, significant differences were observed between AREAS on the same set of variables (F=3.210, df=12, $p<0.001$). Multivariate Analysis for this section also indicated that there was significant interaction of two factors, i.e., RESIDENCE FORM 3 TO 10 and AREA (F=1.540, df=48, $p<0.011$).

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for the variable **modifiers,** and differences between LOCATIONS OF RESIDENCE FROM 3 TO 10 were significant only in **noun-titles** and **items pooled** (Appendix A, Table 38). The analyses did not revealed significant interaction of two factors, i.e., AREAS and RESIDENCE FROM 3 TO 10, in **noun-titles** and **items pooled**.

The Bonferroni Post hoc tests revealed the existence of significant differences between AREAS only in **modifiers** (Table 25T): participants from Krasnoyarsk used significantly less masculine gender than participants from Edmonton, Minsk, and Chisinau. These results are consistent with the results of the analysis (in the section of **modifiers**) when only study areas were compared not correlated to other social factors.

TABLE 25T. RESIDENCE FROM 3 TO 10 BY AREA (SET 1)
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
MODIFIERS	Belarus	Siberia	1.4097	.3669	.001	.3748	2.4446
	Russia	Canada	-1.0361	.3497	.032	-2.0225	-.04966
	Moldova	Siberia	1.0818	.3803	.046	.09012	2.1546
	Canada	Siberia	1.9128	.3571	.000	.9053	2.9203

Based on observed means.
The mean difference is significant at the .05 level.

The Bonferroni Post hoc tests allow reviewing significant differences between LOCATIONS OF RESIDENCE FROM 3 TO 10 on masculine **noun-titles,** and **items pooled** (Table 26T). In the category of **noun-titles**, participants with residence from 3 to 10 in big cities and towns used more masculine gender than participants with residence in the "outside area", and those from villages used less masculine forms than participants with the residence in big cities). For **items pooled**, the participants who lived in "outside area" used significantly fewer masculine forms than participants from big cities, and those from villages fewer than those from big cities.

TABLE 26T. RESIDENCE FROM 3 TO 10 (SET 1)
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) RESIDENCE 3 TO 10	(J) RESIDENCE 3 TO 10				Lower Bound	Upper Bound
NOUN-TITLES	"outside area"	big cities	-3.8740	.9969	.001	-6.6864	-1.0616
		towns	-2.8370	1.0048	.050	-5.6715	-.00254
	big cities	villages	3.4209	1.0874	.018	.3533	6.4885
ITEMS POOLED	"outside area"	big cities	-4.8343	1.2546	.001	-8.3734	-1.2951
	big cities	villages	4.4559	1.3684	.012	.5955	8.3162

Based on observed means.
The mean difference is significant at the .05 level.

In order to assess the results of these tests, it is necessary to establish relationship of residence in "outside" area versus "inside" area with its four subdivisions (capital, big cities, towns, and villages). For this purpose the data from questionnaires was reviewed.

It was established that from those who filled out the forms in Belarus, the overwhelming majority, i.e., six out of total 7, of those who fell into the category "outside area" resided at the ages of 3 to 10 in various regions of Russia, and only one person resided in Ukraine. Thus, if we assume that the tendency to use more masculine gender is more pronounced in Belarus than in Russia, then we may state the influence at the age of 3 to 10 plays a certain role. The scores for "outside area" in all four categories (**noun-titles**, **modifiers**, **verbs**, and **items pooled**) were quite consistently lower than for the "inside area" with its for subgroups.

In the Moscow area, there was a considerable variation of locations within the category of "outside area". The majority, i.e., three persons out of 10 in total, of those who resided in "outside" areas at the age of 3 to 10, lived in Ukraine, two persons were in Kazakhstan, two in Uzbekistan, one in Azerbaijan, one in Uzbekistan, and one in Turkmenistan. With such a variety it is difficult to establish a trend in the influences of local languages. However, the mean values were lower for this group of participants in three out of four categories (**noun-titles**, **modifiers**, and **items pooled**). In the category of **verbs**, the "outside" group, on the contrary, scored more than others did.

In the Moldova area, the number of participants who lived from 3 to 10 years of age outside Moldova, is the highest as compared to other areas included in the present study: 27. The majority of them, i.e., 12, lived in Russia; nine participants lived in Ukraine, two in Belarus, two in Kazakhstan, and one each in Latvia and Uzbekistan. However, despite this variety the "outside" participants consistently scored fewer masculine forms.

In the Edmonton area of the study, it was decided that the correlation would be set between the area of the longest residence in the former Soviet Union and the area of residence between 3 and 10 years of age. Out of a total of 19 participants who lived from 3 to 10 years of age in the area other than the one of their permanent residence, the majority, i.e., seven, formed a group of those whose longest residence was in Russia, but at the age of 3 to 10, they lived in Ukraine. This group was followed in numbers (4 cases) by those lived longest in Russia, but at the age of 3 to 10 lived in Belarus. Next group (3 cases) was those who lived in Belarus longest, but at the age of 3 to 10 lived in Russia. Two participants lived longest in Ukraine, but at the age of 3 to 10 lived in Russia. One participant moved from Estonia to Ukraine, and one from Estonia to Russia. One participant lived most of the time in Belarus, but at the age of 3 to 10 resided in Azerbaijan. Again, with such variation of data it is difficult to establish trends. This was reflected in mean values. In **noun-titles**, the "outside area" scored more than "villages", but less than "towns" , "big cities" and the "capital" . In **modifiers**, the "outside" participants scored more than other groups. In **verbs**, the mean values for all groups were quite similar, except those for participants from towns, who scored fewer masculine forms than other groups. Finally, for **items pooled** grouped together, "outside area" participants scored more than participants from towns and villages, but less than capital and big cities.

In the Krasnoyarsk area, there were 10 participants whose area of longest residence was different from the area of residence from 3 to 10 year. The majority, i.e., five, moved from the Western Siberia to Eastern, three moved from the European part of Russia to Krasnoyarsk, one from Ukraine and one from Moldova. In all categories except **verbs**, "outside" participants scored less masculine than participants from the capital, big cities and towns, but more than participants from villages.

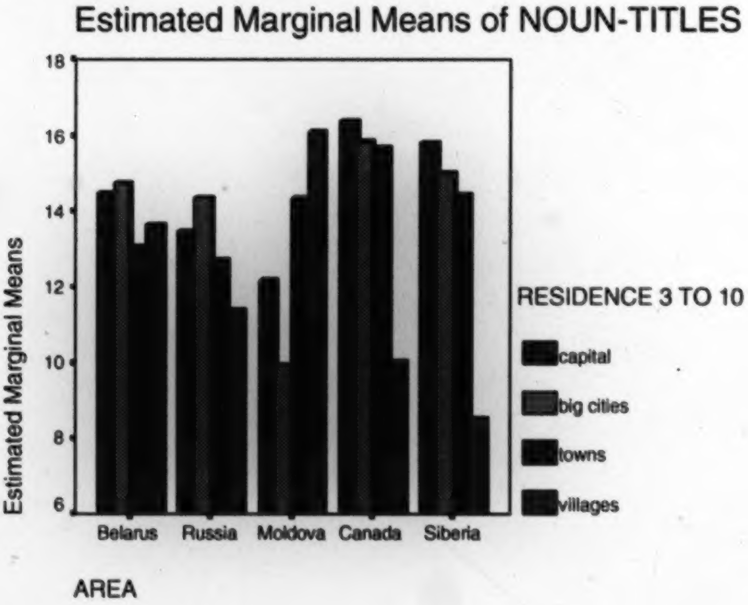
Thus, it became obvious that it is quite hard to obtain clear conclusions with the initial specification of this parameter. Consequently, it was decided to re-arrange the data, i.e., to exclude the category of "outside" area, and distribute the data from this subset among other subsets (capital, big cities, towns, and villages). With the new arrangement of data, the subset of "capital" gained 222 participants, "big cities" - 97, "towns" 89, and "villages" - 70 (Appendix A, Table 39).

Descriptive Statistics (Appendix A, Table 40) showed that in all categories and sets of data there was an adequate number of examples per cell, thus, the statistical analysis would give reliable data. Total means for all study areas taken together generally reveal a tendency of decreased use of masculine gender in rural communities as compared to urban. To some extent the data also allows us to argue that the use of masculine forms also generally decreased with the decrease of the size of township, i.e., less masculine in towns and more in big cities and capitals.

Total means (Appendix A, Table 39) for all areas combined together were distributed in the following way. In **noun-titles**, big cities scored the highest mean of M=14.56, and were followed by towns – M=14.28, capitals M=14.16 and finally by villages – M=11.71 (with the standard deviation varying from 5.92 to 6.49). For **modifiers**, the total highest mean was recorded for big cities: M=8.10, and was followed by towns: M=7.92, the capitals: M=7.78, and finally by villages: M=6.86 (with the standard deviation varying form 2.19 to 2.81). In **verbs**, differences in the mean values were insignificant: capitals – M=1.41, big cities – M=1.33, towns – M=1.31, and villages – M=1.61 (with the standard deviation varying from 1.51 to 1.88). Finally, for items pooled grouped together, the total means for 5 study areas distributed in the following way: capital – M=23.34, big cities – M=23.99, towns, M=22.93, and villages – M=20.19, (with the standard deviation varying from 7.28 to 8.27). A certain variation was recorded for each area.

The Profile Plot of Estimate Marginal Means for **noun-titles** (Plot 29) indicates that only in 3 out of 5 study areas were the means for rural areas lower than those for urban ones (Moscow, Canada and Krasnoyarsk). In the Moscow area, participants who lived in villages received the mean of M=11.36, sd=4.84, and urban areas scored higher: towns – M=12.71, sd= 4.98, capital – M=13.45, sd=5.26, and big cities M=14.33, sd=6.89. Both in Edmonton and Krasnoyarsk the means for those who lived in rural areas are considerably lower than the means for those who lived in urban areas. In addition, means decreased with decreasing of the size of township for these areas. In Canada, those who lived in villages at the age of 3 to 10, scored the mean of *M*=10.00, sd=5.87, while those who lived in towns – *M*=15.67, sd=7.48, those who lived in big cities – *M*=16.81, sd=6.27, and those who lived in the capitals of respective regions – *M*=16.38, sd=7.64. In Krasnoyarsk area, the distribution was as follows: villages – *M*=8.52, sd=4.38, towns – *M*=14.43, sd=5.14, big cities – *M*=15.00, sd=4.74, and the capital – *M*=15.80, sd=4.87. In Belarus, those who lived in towns scored less than others: *M*=13.05, sd=5.16, while the highest mean was achieved by participants who lived in big cities *M*=14.71, sd=5.94 with those from the capital having the mean of *M*=14.46, sd=5.78 and those from villages – *M*=13.64, sd=6.66. In Chisinau area, similarly to data for items pooled and verbs, the distribution of means is contrasting to other areas: those who lived in villages scored the highest mean – *M*=16.07, sd=8.03,

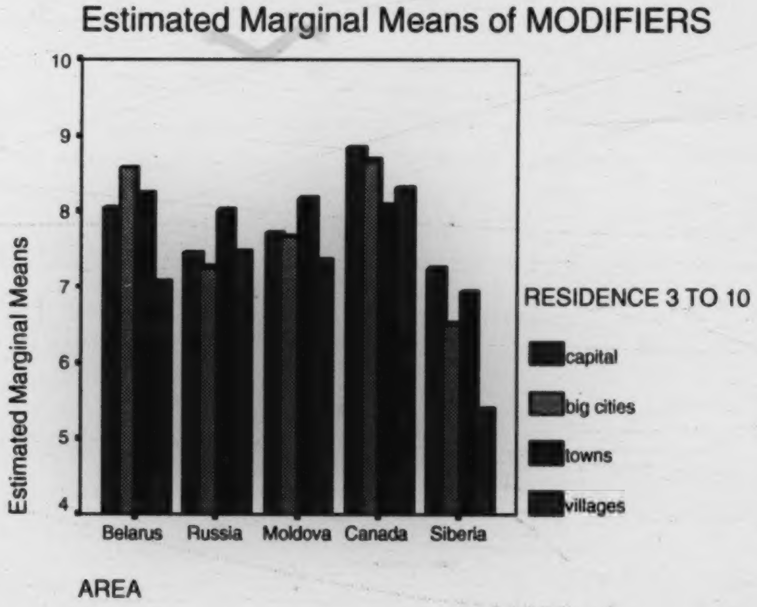
PLOT 29. RESIDENCE FROM 3 TO 10 (SET 2)



and were followed by those who resided in towns (*M*=14.30, sd=5.91), capital (*M*=12.14, sd=5.73) and big cities (*M*=9.93, sd=5.82).

The plot for Estimated Marginal Means in the use of masculine gender for **modifiers** (Plot 30) shows that participants who lived as children in rural areas scored less masculine than in urban areas in Belarus (*M*=7.07, sd=2.21), Moldova (*M*=7.70, sd=2.94), and Siberia *M*=5.38, sd=2.13 (See also Appendix A, Table 41). It is remarkable that participants from rural areas in Krasnoyarsk had a significantly lower mean than in all other areas. In the Moscow area participants who lived from 3 to 10 in rural areas scored practically the same mean as those from the capital (*M*=7.43, sd=2.93 and *M*=7.45, sd=3.14) while those who lived in towns had the highest mean (*M*=8.00, sd=2.25) and those who lived in big cities had the lowest mean (*M*=7.25, sd=2.93). In Chisinau, those who lived in the capital and those who lived in big cities had almost equal means (*M*=7.70, sd=2.95, and *M*=7.66, sd=3.17, respectively), with

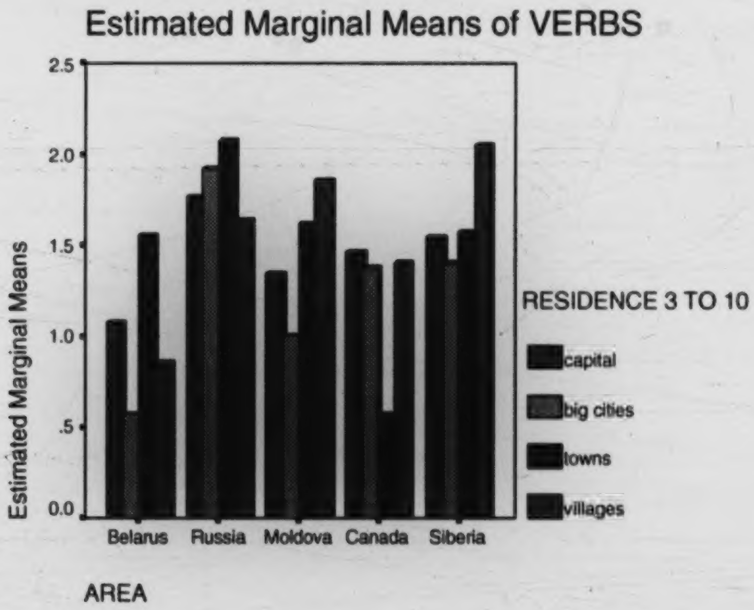
PLOT 30. RESIDENCE FROM 3 TO 10 (SET 2)



those who lived in towns scoring the highest mean (*M*=8.15, sd=2.58). In Canada, the distribution of means was as follows: capital – *M*=8.83, sd=2.25, big cities – *M*=8.66, sd=2.12, villages - *M*=8.30, sd=1.77, and the lowest for towns – *M*=8.07, sd=2.26. In Belarus, the data for urban area showed that participants from big cities had the highest mean – *M*=8.57, sd=1.99, and were followed by those who lived in towns – *M*=8.22, sd=1.89, and then by those from the capital – *M*=8.03, sd=2.21. Finally, in the Krasnoyarsk study area, those who lived at 3 to 10 years of age in the capital of the region had the highest score: *M*=7.23, sd=2.13, and were followed by those who lived in towns *M*=6.92, sd=2.02, and big cities – *M*=6.50, sd=2.17. Observation of means in this category of data allows us to make the claim that in majority of study areas, i.e., three out of five, participants who lived at the age of 3 to 10 in urban areas differed from those who lived in rural areas, preferring more masculine forms.

In the category of **verbs** (Plot 31), the Estimated Marginal Means for five study areas display quite a mixed picture. Different trends were revealed in practically all areas. Only in two, Moldova and Eastern Siberia, were the means for the use of masculine

PLOT 31. RESIDENCE FROM 3 TO 10 (SET 2)

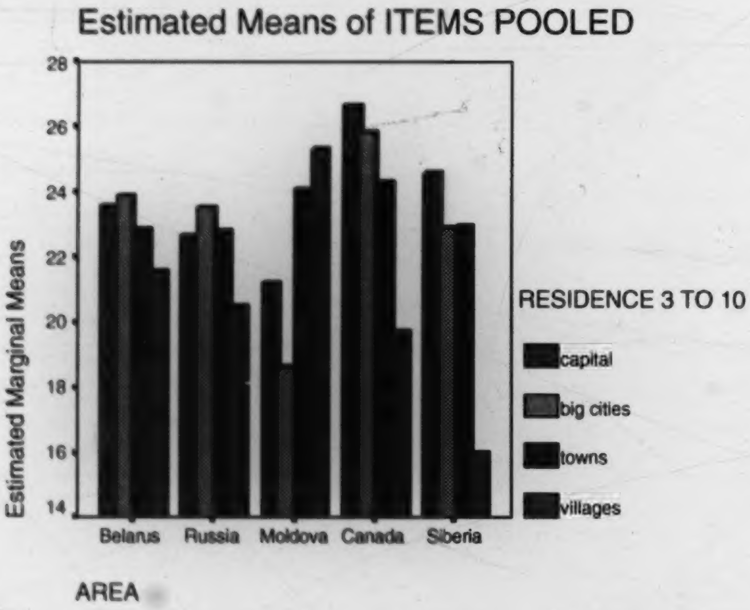


for those who lived in rural areas as children higher than the means for other groups of data. In Belarus, those who lived in big cities scored fewer masculine forms than those from villages (*M*=0.57, sd=0.79 *versus* *M*=0.86, sd=1.17) with those who lived in towns and the capital having higher means (*M*=1.56, sd=1.69 and *M*=1.08, sd=1.78, respectively). In Moldova, those who lived in villages, similarly to data for **items pooled**, had the highest mean (*M*=1.85, sd=1.96), and were followed by those who lived in towns (*M*=1.62, sd=1.56), those who lived in the capital (*M*=1.34, sd=1.78) and those who lived in big cities (*M*=1.00, sd=1.31). Similarly, in Krasnoyarsk area, those who lived in villages had the highest mean (*M*=2.04, sd=1.86) and were followed by those who lived towns (*M*=1.57, sd=0.93), the capital (*M*=1.54, sd=1.67) and big cities (*M*=1.40, sd=1.26). In Edmonton area, those who lived in the capitals of their respective regions got the highest mean (*M*=1.46, std deviation 2.13) while those who lived in villages were in second place (*M*=1.40, sd=1.71), those who lived in big cities – in third place (*M*=1.38, sd=1.87) and those who lived in towns – in fourth (*M*=0.56, sd=0.89. Note that this last-named mean is quite significantly lower than for others. Only in Moscow area, participants who lived in rural areas scored less than those who lived in urban areas (cf. *M*=1.63, sd=1.29 *versus* *M*=1.76, sd=1.78/capital, *M*=1.92, sd=2.11/ big cities, and *M*=2.07, sd=2.16/ towns). Observation of means in 5 study areas for this category allows us to state that there is hardly any correlation of residence at the age of 3 to 10 with the choice of masculine versus feminine verbs.

The data for **items pooled** (Graph 23) reveal differences in the various areas. In all the study areas except Moldova the means for "villages" were consistently lower than the means in the other sets. In Canada and Krasnoyarsk the results followed the predicted trend, i.e., decrease of masculine with smaller size of the community, particularly precisely. Participants who resided in the capitals at the age of 3 to 10 scored the highest means: *M*=26.67 (sd=8.45) and *M*=24.57 (sd=6.16), respectively. They were followed by those who lived in big cities big cities: *M*=25.85 (sd=7.55) for Edmonton and *M*=22.90 (sd=5.90) for Krasnoyarsk, those who lived in towns: *M*=24.30 (sd=8.89) and *M*=22.92 (sd=5.95), and finally those who lived in villages: *M*=19.70

(sd=7.75) and *M*=15.95 (sd=5.65), respectively. Note that for these two areas the mean values for villages were considerably lower than means for other sets. This is especially evident for the Krasnoyarsk area. In Belarus and Moscow differences of means between sets were not very pronounced. Participants who resided in big cities scored the highest levels of masculine gender: *M*=23.85 (sd=5.52) in Belarus and *M*=23.50 (sd=8.93) in Moscow, and were followed by those who lived in the capital for the Belarus area: *M*=23.57 (sd=6.79) and those who lived in towns for the Moscow area: *M*=22.79 (sd=6.94), those who lived in towns for the Belarus area: *M*=22.83 (sd=5.76), and those who lived in the capital for the Moscow study area: *M*=22.64 (sd=7.52), and finally, those who lived in villages: *M*=21.57 (sd=6.70) for Belarus and *M*=20.45 (sd=7.61) for Moscow. The Chisinau area displayed quite opposite results as compared to other areas: those who lived at the age of 3 to 10 in villages acquired the highest level of masculine forms (*M*=25.28, sd=11.12), those who lived in towns –

PLOT 32. RESIDENCE FROM 3 TO 10 (SET 2)



M=24.08 (sd=7.53), those from the capital *M*=21.19 (sd=8.47) and those who lived in big cities – *M*=18.60 (sd=8.00). It seems possible to state that the means for items pooled grouped together for the study areas, other than the Chisinau, quite clearly show the difference in responses of those who lived in urban and rural areas.

Multivariate Analysis of variance (Appendix A, Table 41) indicated that there was a significant difference between LOCATIONS OF RESIDENCE FROM 3 T0 10 on the set of four variables: **noun-titles**, **modifiers**, **verbs**, and **items pooled** (F=4.4.286, df=4, p<0.005). In addition, significant differences were observed between AREAS on the same set of variables (F=3.070, df=12, p<0.001). Multivariate Analysis for this section also indicated that there was significant interaction of two factors, i.e., RESIDENCE FORM 3 TO 10 and AREA (F=2.869, df=12, p<0.001).

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for the variable of **modifiers,** and differences between LOCATIONS OF RESIDENCE FROM 3 TO 10 were significant only in **noun-titles** and **items pooled** (Appendix A, Table 42). The analyses revealed significant interaction of two factors, i.e., AREAS and RESIDENCE FROM 3 TO 10, only in the categories of **noun-titles** and **items pooled**.

The Bonferroni Post hoc tests revealed the existence of significant differences between AREAS only in **modifiers** (Table 27T): participants from Krasnoyarsk used significantly less masculine gender than participants from Edmonton, Minsk, and Chisinau. Participants from Moscow used significantly less masculine than participants from Edmonton. These results are consistent with the results of the analysis (in the section of **modifiers**) when only study areas were compared not correlated to other social factors.

TALBE 27T. RESIDENCE FROM 3 TO 10 BY AREA (SET 2)
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
MODIFIERS	Russia	Canada	-1.0128	.3504	.040	-2.0013	-.02432
	Siberia	Belarus	-1.3712	.3693	.002	-2.4129	-.3294
		Moldova	-1.1079	.3826	.040	-2.1871	-.02858
		Canada	-1.9128	.3603	.000	-2.9291	-.8965

Based on observed means.
The mean difference is significant at the .05 level.

The Bonferroni Post hoc tests allow us to detect significant differences between LOCATIONS OF RESIDENCE FROM 3 TO 10 on masculine **noun-titles**, and **items pooled** (Table 28T). In both categories, participants with residence from 3 to 10 in the capital of the region, big cities and towns used more masculine gender than participants with residence in villages. These results are generally consistent with the data from the previous section in comparison of rural and urban areas.

Thus, the results of Multivariate Tests and observation of Estimated Marginal Means in 5 study areas confirm that the linguistic influence at the early age significantly influences choices of masculine and feminine forms in occupational titles, and Hypothesis 8 has been confirmed.

TALBE 28T. RESIDENCE FROM 3 TO 10 (SET 2)
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) RESIDENCE 3 TO 10	(J) RESIDENCE 3 TO 10				Lower Bound	Upper Bound
NOUN-TITLES	villages	capital	-2.4434	.8174	.018	-4.6092	-.2776
		big cities	-2.8424	.9351	.015	-5.3203	-.3646
		towns	-2.5666	.9526	.044	-5.0907	-.0425
ITEMS POOLED	villages	capital	-3.1611	1.0329	.014	-5.8980	-.4243
		big cities	-3.8040	1.1817	.008	-6.9352	-.6728
		towns	-3.3311	1.2037	.035	-6.5208	-.1415

Based on observed means.
The mean difference is significant at the .05 level.

4.2.9. Parents' area of residence

Using the data provided by the participants in the questionnaires it was decided to test the influence of parents' area of residence. Three categories were defined: those who had both parents from outside of their own principal area of residence ("both outside"), those who had both parents living in the same area ("both inside"), and those with one parent from outside areas and one from the same area ("mixed"). Between-Subjects Factors (Appendix A, Table 43) indicates that there were 101 participants who fell into the first category, 290 of those who would fit into the second category, and 83 of those who belonged to the third group.

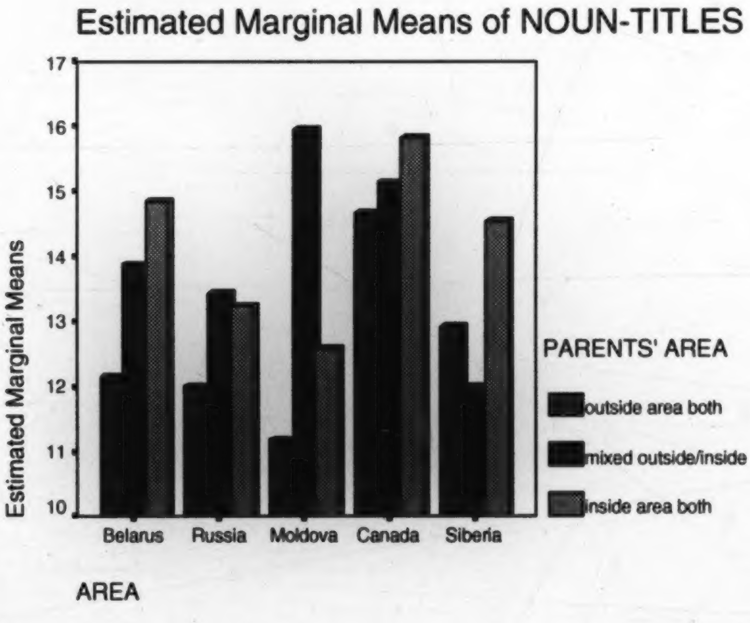
Total means form Descriptive Statistics (Appendix A, Table 44) for all areas taken together show that for **noun-titles** and **items pooled**, the means for those with "both outside" were lower than those for participants with "both inside" parents and "mixed" parents (cf. M=21.67 (sd=8.41) *versus* M=23.37 (sd=7.42) "both inside" and M=23.61 (sd=8.01) "mixed" for **items pooled** together, and M=12.46 (sd=6.36) *versus* M=14.36 (sd=6.01) "both inside" parents, and M=14.17 (sd=6.33) "mixed" for **noun-titles**.

Total means for all areas together in **modifiers** reveal that the participants with both parents from the same area scored less masculine forms (M=7.66, sd=2.53) than those with "both outside" parents (M=7.84, sd=2.76) and "mixed" (M=7.83, sd=2.36). Note, however, that the differences between means are quite insignificant.

In **verbs**, total means for all areas together reveal the same tendency as in **modifiers**, i.e., participants both of whose parents were from the same area scored fewer masculine forms (M=1.34, sd=1.60) than those both of whose parents were from outside areas (M=1.39, sd=1.82) and "mixed" (M=1.61, sd=2.11). Again, the difference between means was quite small. A review of the study areas indicates substantial differences in them.

Thus, in **noun-titles** (Plot 33) Estimated Marginal Means in four areas out of five (Belarus, Moscow, Moldova and Edmonton) participants with both parents from outside the regions had the lowest means: *M*=12.13, sd=5.86; *M*=12.00, sd=7.62; *M*=11.17, sd=5.80; *M*=14.65, sd=7.52, respectively. In Belarus and Canada, the second highest score was for those with "mixed" parents: *M*=13.87, sd=5.21, and *M*=15.14, sd=7.62, respectively. In Moscow and Chisinau, the second highest score was for participants with both parents from the same area: *M*=13.23, sd=5.14, and *M*=12. 58, sd=6.53, respectively. In Belarus and Canada, the highest means for masculine had participants with "both inside" parents: *M*=14.85, sd=5.77, and *M*=15.81, sd=6.65, respectively. While in Moscow and Chisinau the highest means were taken by participants with only one parent from the same area: *M*=13.43, sd=6.90, and *M*=15.94, sd=6.22, respectively. In Krasnoyarsk area, the lowest mean is found for participants with "mixed" parents (*M*=12.00, sd=5.30), and the highest – for those with "both inside" parents (*M*=14.54, sd=6.67), while those with both parents

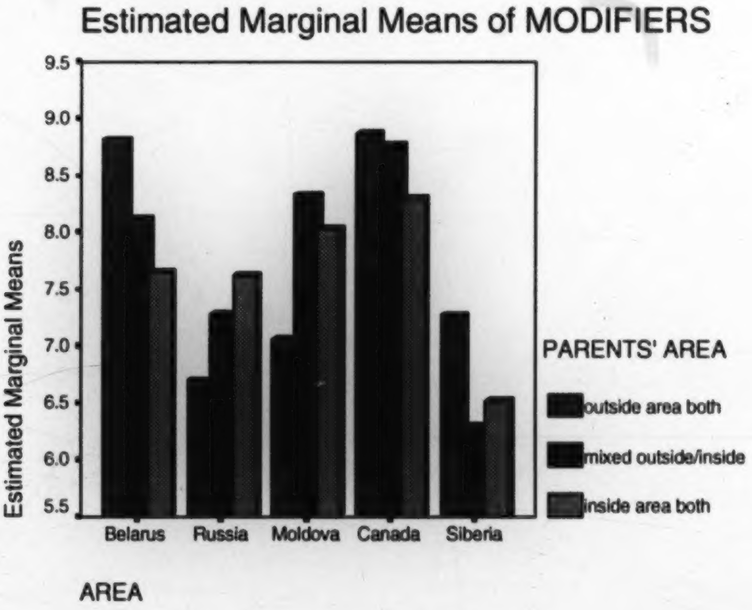
PLOT 33. PARENTS' AREA



from outside regions are in between the other two groups (*M*=12.90, sd=4.88). Note also, that there was a considerable difference in means for the three tested groups within the areas of Belarus, Moldova and Krasnoyarsk.

In **modifiers** (Plot 34), the picture is substantially reversed as compared to the previous sub-section. In three study areas (Belarus, Canada and Krasnoyarsk) participants with parents from "outside areas" obtained means higher than in other two sets of data. In Belarus and Canada, the "mixed" parameter was in the intermediate position between the other two. On the other hand in Moscow and Moldova, participants with both parents from "outside" scored lower means than participants with "both inside" parents and those with "mixed" parents. In Moscow the distribution was as follows: participants with both parents from the outside area: *M*=6.70, sd=3.95, those with "mixed" parents: *M*=7.28, sd=1.98, and those with "both inside" parents: *M*=7.62, sd=2.76. In Moldova, participants with "both outside" parents had a mean of *M*=7.06, sd=3.45, those with both parents from the same area as participants – *M*=8.02, sd=2.48, and those with one parent form the "outside area" – *M*=8.33,

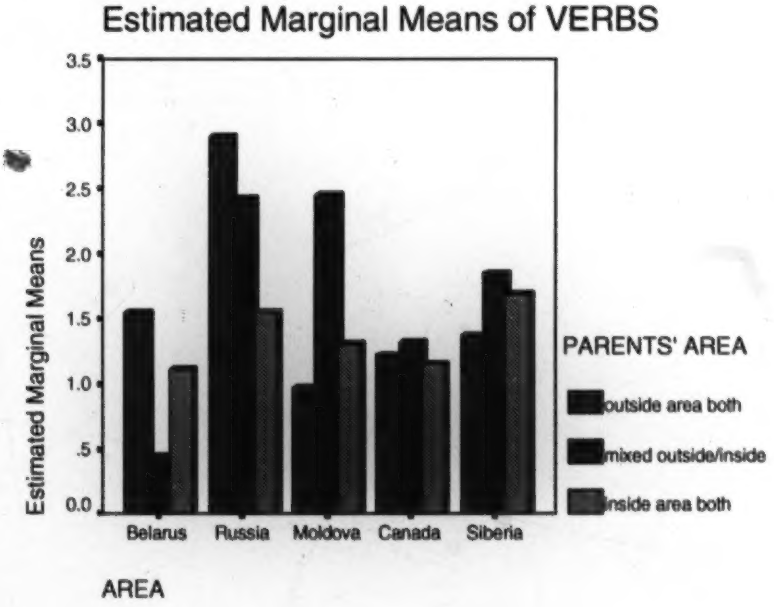
PLOT 34. PARENTS' AREA



sd=2.50. However, in Belarus, Canada and Krasnoyarsk area, participants with both parents from the outside areas had the highest mean – *M*=8.81, sd=1.40, *M*=8.86, sd=1.54, and *M*=7.27, sd=2.05, respectively. Then in Belarus and Canada those with "mixed" parents were in the second place – *M*=8.12, sd=2.28, and *M*=8.77, sd=1.97, respectively. In the Krasnoyarsk area the second place was taken by those whose both parents were from within the area: *M*=6.52, sd=2.43. Finally, in Belarus and Canada, participants with both parents from the same region had the lowest means: *M*=7.65, sd=2.34, and *M*=8.29, sd=2.37, respectively. In Krasnoyarsk, the lowest mean was in participants with "mixed" parents.

In **verbs** (Plot 35), again a considerable difference among the areas can be observed. Only in two areas, i.e., Moldova and Krasnoyarsk, did the participants with both parents from outside regions score the lowest means: *M*=0.97, sd=1.50, and *M*=1.36, sd=1.12, respectively. The other two groups in these areas scored as follows: both parents from the same area – *M*=1.30, sd=1.41, and *M*=1.69, sd=1.48 *versus* "mixed"

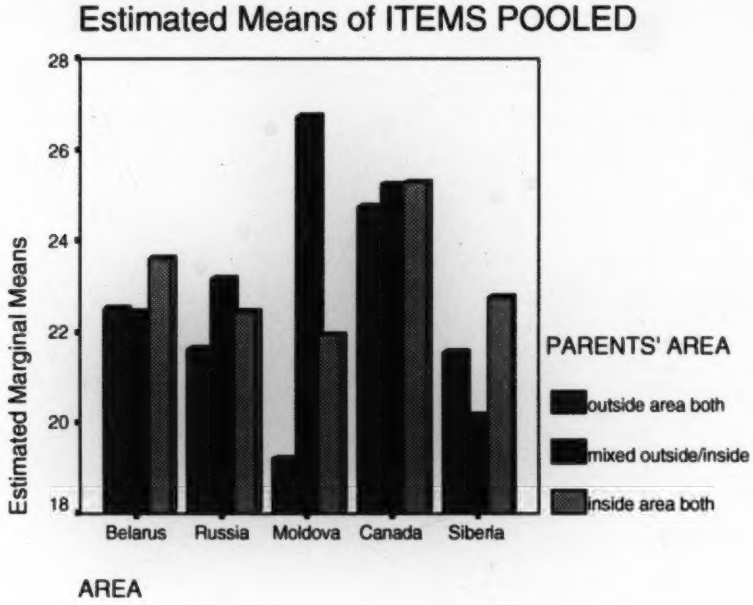
PLOT 35. PARENTS' AREA



parents – *M*=2.44, sd=2.87, and *M*=1.85, sd=1.91, respectively. In the areas of Minsk and Moscow, participants with parents from outside areas had the highest means: *M*=1.54, sd=2.04, and *M*=2.90, sd=1.85, respectively. In the Moscow area, they were followed by those with "mixed" parents (*M*=2.42, sd=1.99) and in Minsk area by those with both parents from the same region (*M*=1.11, sd=1.68). On the third position in these areas were participants with "mixed" parents (*M*=0.44, sd=0.72) for Belarus, and those with "both inside" parents (*M*=1.55, sd=1.72) in Moscow. In Edmonton study area the difference of means were quite insignificant: participants with both parents from the same region – *M*=1.15, sd=1.60, with both parents from outside areas - *M*=1.21, sd=2.07, and those with "mixed" parents *M*=1.31, sd=1.91. Note also that means varied quite substantially in the Moscow and Moldova areas.

In **items pooled** (Plot 36), participants from Moldova displayed the most variation in Estimated Marginal Means. Participants with "both outside" parents had the lowest mean: *M*=19.20, sd=8.39, and were followed by those with "both inside" parents: *M*=21.92, sd=8.35, and by those with parents of "mixed" area of residence - *M*=26.72, sd=9.01. In Canada, on the contrary, variation was quite small: participants with parents from the "outside area" – *M*=24.74, sd=9.29, those with "mixed" parents – *M*=25.23, sd=9.46, and those with both parents from the same area – *M*=25.27, sd=7.73. In the Moscow study area, the tendency was similar to the Moldavian area, however the difference in means was not so pronounced: participants with "mixed" parents – *M*=23.14, sd=5.94, participants with "both inside" parents – *M*=22.41, sd=7.23, and participants with "both outside" parents– *M*=21.60, sd=11.08. In both Belarus and Krasnoyarsk, the trend in responses was consistent. Participants whose both parents were form the same area had the highest means: *M*=23.60, sd=6.85, and *M*=22.75, sd=6.93, respectively. Those whose both parents were from outside areas scored the next highest mean: *M*=22.50, sd=6.49, in Belarus and 21.54, sd=5.97, in Krasnoyarsk, and these were followed by participants with one parent from the "outside area" *M*=22.44, sd=4.92, in Belarus and *M*=20.15, sd=6.99, in Krasnoyarsk. Note that in Belarus the difference between "mixed" and "outside" is quite small. Thus, in this category of data, i.e., **items pooled**, in three areas out of five the mean values for participants with parents from outside areas were lower than means for those with at least one parent from the same area.

PLOT 36. PARENTS' AREA



Given the inconsistencies noted above, it seems reasonable to adduce data from the sociological portion of the questionnaire in this connection.

For the Belorusian area, 22 participants stated that both their parents were from outside Belarus. The overwhelming majority of these parents were from Russia: 18. Two were from Siberia, one had both parents from Ukraine, and one participant indicated that his parents were from Russia and Poland. Similarly, when only one parent was from outside areas, the majority, again, lived in Russia (10 out of 16), some in Ukraine (3), some from Poland (2), and one person had a parent from Moldova. Thus, noting that the tendency to use more masculine is more pronounced in Belarus than in Russia, we may explain why, in this particular case, participants with both parents from other areas had lower means (in all items grouped together, and in noun-titles with two gender forms) than those with both or one parent from the same area.

In the Moscow area, the number of participants with both parents from outside areas was quite low, only ten. The distribution of areas was as follows: 3 from Ukraine, 2 from Uzbekistan, 2 from Siberia, 1 from Georgia, 1 from Azerbaijan, and 1 from Kazakhstan. Those with only one parent from outside areas amounted to 7 people: 4 from Ukraine, 2 from Belarus, and 1 from Georgia. Having this variety of regions, it is difficult to establish any trend in responses.

In the Chisinau area, the number of participants whose both parents were from other regions constituted almost a third (35 out of 89), with those having "mixed" parents making up a significant portion (18). For those who had both parents from outside regions, the majority were from Russia (16), with those from Ukraine – 11, from Russia and Ukraine – 4, from Belarus – 1, from Uzbekistan and Russia – 1, from Azerbaijan – 1, and from Latvia – 1. For those with one parent from the outside area, the majority was again from Russia (8), with 7 from Ukraine, 1 from Latvia and 1 from Kazakhstan. Thus, in this category we may expect a strong influence from Russia, and consequently higher means for masculine forms. However, as can be seen from the comparison of means below, this prediction was not realized, i.e., in all categories means for participants with "outside" parents were again lower for those who had both parents from "inside".

In the Edmonton area, it is difficult to categorize the data on parents' area of residence since the participants lived in various regions of the former Soviet Union. Among those participants who stated that their both parents were from outside regions (23), the majority resided in Russia and had parents from Ukraine (8), some had parents from Belarus (5), from Ukraine and Belarus – 1, and Moldova and Ukraine –1. In 4 cases participants were from Belarus, but their parents were from Russia (3) and Azerbaijan (1). Three participants were from Estonia and had parents from Ukraine - 1, Ukraine and Belarus - 1, and from Russia - 1. One participant had parents in Russia but resided in Ukraine. The data for participants with one parent from the outside area, the majority of subjects resided in Russia (11 out 22) and had a parent from Ukraine (5), Belarus (1), Kirgizstan (1), Siberia (3), and Azerbaijan (1). In the next position were those who resided in Ukraine (8) with their parent being from Russia (7) and Poland (1). Two participants stated that they resided in Belarus and had one parent from Russia (1 case) and Ukraine (1 case). In one instance the participant resided in Armenia, but had one parent from Georgia. Again, one can notice that there is a considerable variety of data on the parents' area of residence as compared to the participants' principal area of residence, and it is difficult to predict a trend.

In the Krasnoyarsk area, the number of participants whose both parents were from an area other than the Krasnoyarsk Territory totaled 11. The majority of parents in this case were from western Siberia (9), with 2 cases of parents from European Russia. The number of participants with one parent from the "outside area" totaled 22. The majority of them were from the western Siberia – 13, with 3 from European Russia, 3 from Russia's Far East, 2 from Ukraine, and 1 from Moldova. The comparison of study areas (Section 4.2.1) revealed that participants from Krasnoyarsk used less masculine than those from all other study areas in **modifiers**. The results from this portion of analysis indicate that the means for participants with "both outside" and "mixed" parents were higher than for participants with "both inside" parents. If we assume that the parents were influenced by the language trends in more western areas, i.e., increased use of masculine, we may postulate that it also influenced the language habits of their children, which is reflected in higher means for masculine in this category.

Multivariate Analysis of variance (Appendix A, Table 45) indicated that there was no significant difference between PARENTS' AREAS parameters on the set of four variables: **noun-titles**, **modifiers**, **verbs**, and **items pooled** (F=1.536, df=6, p<0.163). However, significant differences were observed between AREAS on the same set of variables (F=3.833, df=12, p<0.001). Multivariate Analysis for this section also indicated that there was no significant interaction of two factors, i.e., PARENTS' AREA and STUDY AREA (F=1.479, df=24, p<0.064).

A series of Univariate analyses of variance indicated that the differences between STUDY AREAS were significant for the variable of **modifiers** and **verbs,** and differences between PARENTS' AREAS were not significant (Appendix A, Table 46). The analyses revealed significant interaction of two factors, i.e., STUDY AREAS and PARENTS' AREA, only in the category of **verbs**.

The Bonferroni Post hoc tests revealed the existence of significant differences between STUDY AREAS only in **modifiers** (Table 29T): participants from Krasnoyarsk used significantly less masculine gender than participants from Edmonton, Minsk, and Chisinau. Participants from Moscow used significantly less masculine than participants from Edmonton. No significant differences between areas, however, were obtained in the category of **verbs**. These results are consistent with the results of the analysis (in the section of **modifiers**) when only study areas were compared not correlated to other social factors.

TABLE 29T. PARENTS' AREA BY STUDY AREAS
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
MODIFIERS	Belarus	Siberia	1.4015	.3702	.002	.3573	2.4458
	Russia	Canada	-1.0116	.3530	.043	-2.0072	-1.601
	Moldova	Siberia	1.1382	.3834	.031	5.671	2.2198
	Canada	Siberia	1.9304	.3618	.000	.9097	2.9510

Based on observed means.
The mean difference is significant at the .05 level.

In conclusion for this portion of our analysis we may note that although no significant differences for the factor of parent's area of residence were obtained (i.e., Hypothesis 9 was not confirmed with statistically significant results), the comparison of Estimated Marginal Means indicates that in certain instances participants whose parents were from "outside" areas differed from participants whose parents were from the same area or parents with "mixed" area of residence. Thus, for **noun-titles** "outside" scored lower means of masculine than "inside", but for **modifiers** only in two study areas (Russia and Moldavia) the same picture was observed.

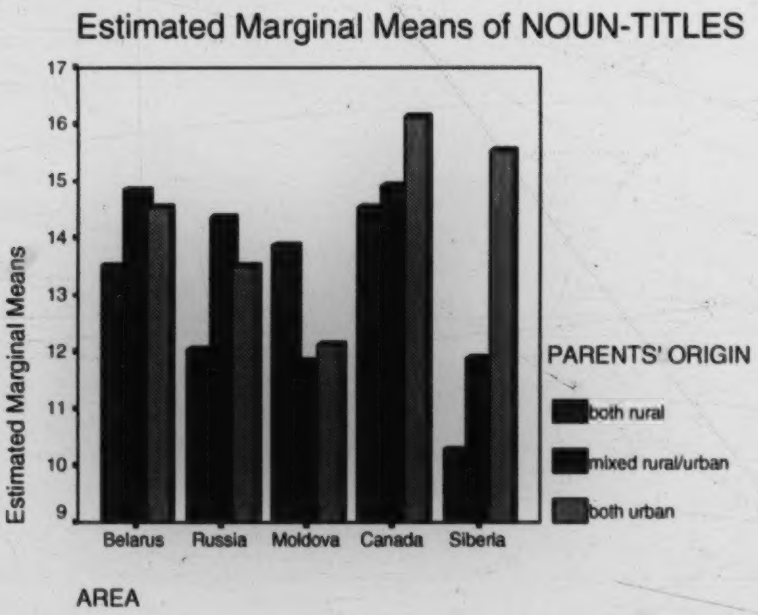
4.2.10. Parents' origin

According to the information provided by the participants in the questionnaires as to the origin of their parents, the following groups were established: those who had both parents from rural areas ("both rural") – 159 cases, both parents from urban areas ("both urban") – 228, and those who had one parent form the rural area and one from the urban area ("mixed")– 74 (Appendix A, Table 47).

Observation of total means for all study areas taken together (Appendix A, Table 48) shows that those with parents from rural areas had lower means than those both or one of whose parents were from urban areas in all categories of data except for **verbs** used with masculine noun-titles denoting women. For **noun-titles**, participants with both parents from rural areas had the lowest mean of masculine forms – *M*=13.30, sd=5.88, with participants having "mixed" parents scoring more masculine – *M*=13.74, sd=6.78, and those with both parents from urban areas scoring the highest mean – *M*=14.48, sd=6.11. For **modifiers**, the distribution of means was as follows: *M*=7.55, sd=2.74 for those with "both rural" parents, *M*=7.80, sd=2.53 for those with "both urban" parents, and *M*=7.75, sd=2.27, for those with "mixed" parents. In **verbs**, participants with parents from rural areas scored the highest mean of masculine forms – *M*=1.54, sd=1.87, followed by those with "mixed" parents – *M*=1.50, sd=1.67, and by those with both parents from urban areas – *M*=1.27, sd=1.64. For **items pooled**, participants with "both rural" parents scored *M*=22.39, sd=7.78, while those with "both urban" parents – *M*=23. 56, sd=7.61, and those with "mixed" parents – *M*=23.00, sd=8.13. Let us examine now the differences between study areas.

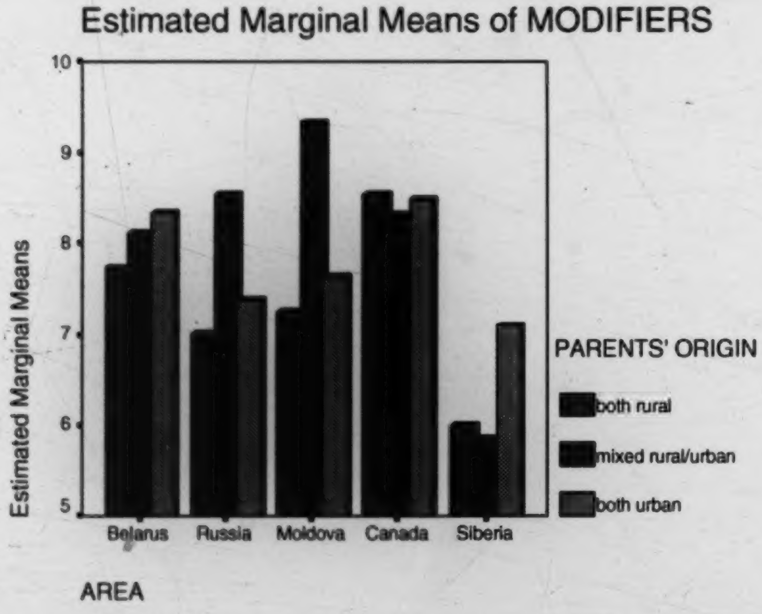
The data for **noun-titles** (Plot 37) indicate that in four study areas out of five (Belarus, Moscow, Canada and Krasnoyarsk) participants with "both rural" parents had lowest means: *M*=13.51, sd=5.75, *M*=12.04, sd=5.12, *M*=14.53, sd=6.43, and *M*=10.28, sd=4.71, respectively. In Canada and Siberia, participants with "both urban" parents scored the highest means: *M*=16.11, sd=6.83, and *M*=15.53, sd=5.65, with those with "mixed" parents lower than that: *M*=14.92, sd=8.41, and *M*=11.89, sd=6.48, respectively. In Minsk and Moscow, participants with one parent from urban communities had the highest means (*M*=14.84, sd=5.97, and *M*=14.35, sd=6.31, respectively) while those with both parents from urban areas had slightly lower means (*M*=14.53, sd=5.74, and *M*=13.51, sd=5.60, respectively). In Moldova, the distribution of means was different: participants with "mixed" parents – *M*=11.83, sd=8.23, those with "both urban" parents – *M*=12.13, sd=6.33, and those with "both rural" parents – *M*=13.88, sd=6.17.

PLOT 37. PARENTS' ORIGIN



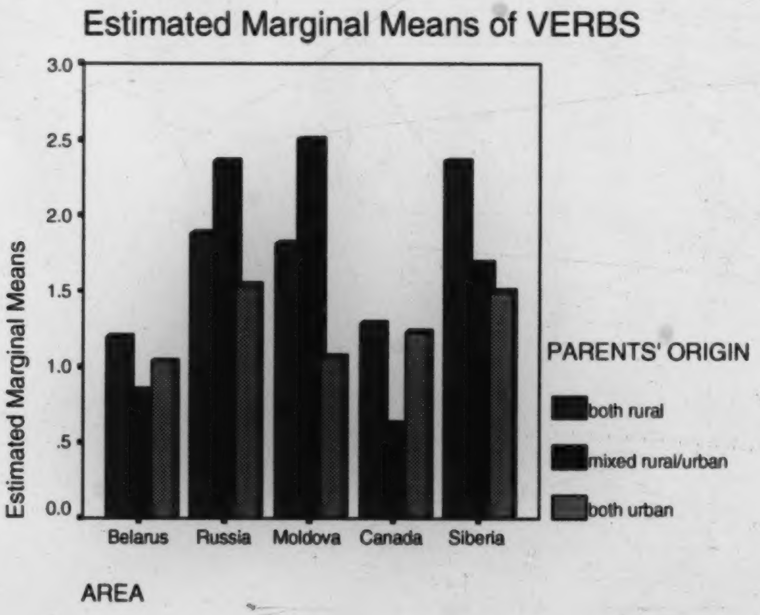
In the category of **modifiers** (Plot 38), in three study areas out of five (Belarus, Moscow and Moldova) the means for participants with both parents from rural areas were lower than those for participants with at least one parent from urban communities. In Moscow and Moldova, participants with "mixed" parents scored the highest means: *M*=8.53, sd=1.66, and *M*=9.33, sd=0.82, respectively, and were followed by those with "both urban" parents: *M*=7.37, sd=3.08, and *M*=7.63, sd=2.80, respectively, and by those with "both rural" parents: *M*=7.00 sd=3.04, and *M*=7.25, sd=3.35, respectively. In Belarus and Krasnoyarsk, participants with both parents from urban areas score the highest means: *M*=8.33, sd=2.32, and *M*=7.09, sd=2.07, respectively. In Belarus, they were followed by those with one parent from rural area – *M*=8.11, sd=2.33, and then by those with both parents from rural communities – *M*=7.73, sd=2.32. In Krasnoyarsk, this distribution was reversed: those with "mixed" parents had the lowest mean – *M*=5.84, sd=2.19, and participants with both parents from villages a slightly higher mean – *M*=6.00, sd=3.01. In Canada, the difference of means was virtually insignificant: from *M*=8.31 to *M*=8.53.

PLOT 38. PARENTS' ORIGIN



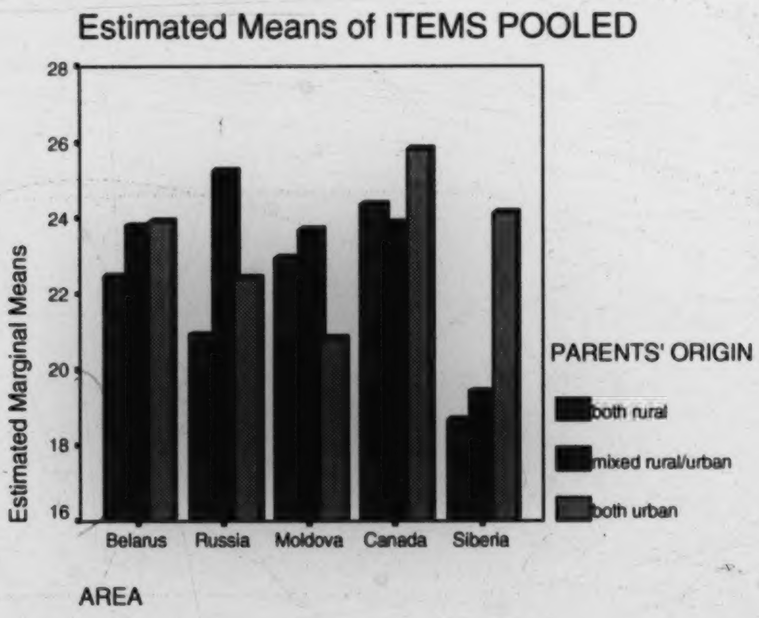
In **verbs** (Plot 39), the data reveal a considerable degree of variation between areas. The means of participants from Moscow and Moldova display similarities. In both areas participants with both parents from urban communities had the lowest means: *M*=1.53, sd=1.71, and *M*=1.06, sd=1.34, respectively. They were followed by those with both parents from rural areas (*M*=1.88, sd=1.78, and *M*=1.81, sd=2.32, respectively) and by those with one parent from rural areas (*M*=2.35, sd=2.03, and *M*=2.50, sd=2.88, respectively). In Belarus and Canada, on the contrary, the lowest means were revealed by those with "mixed" parents: *M*=0.84, sd=1.01, and *M*=0.62, sd=0.87, respectively. In these study areas, participants with "both rural" parent had the highest means for the masculine gender: *M*=1.19, sd=1.68, and *M*=1.27, sd=1.58, respectively, with the participants having "both urban" parents were in between the other two groups: *M*=1.03, sd=1.93, and *M*=1.22, sd=1.79, respectively. In Krasnoyarsk, the participants with both parents from rural communities had the highest mean (*M*=2.35, sd=2.13), and those with "mixed" parents – *M*=1.68, sd=1.34, and *M*=1.48, sd=1.44, respectively. The general picture of means (if we disregard the data for "mixed" in Belarus and Canada) in this category shows that responses of participants from urban areas contained less masculine gender than the responses of those who had at least one parent from rural areas.

PLOT 39. PARENTS' ORIGIN



For **items pooled** (Plot 40), participants with both parents from rural areas had lower means than the other two groups in three study areas out of five (Belarus, Moscow, and Krasnoyarsk). In Belarus, the distribution of means was as follows: participants with both parents from rural areas: *M*=22.44, sd=6.62, those with one parent from urban area – *M*=23.78, sd=6.94, and those with both parents from urban areas – *M*=23.90, sd=6.52. In Moscow, participants with "mixed" parents had the highest mean – *M*=25.24, sd=7.24, and were followed by those with "both urban" parents – *M*=22.42, sd=7.42, with the lowest mean for those with "both rural" parents – *M*=20.92, sd=8.10. In Krasnoyarsk, participants with both parents from urban communities scored the highest mean – *M*=24.11, sd=5.54, and were followed by those with one parent from urban areas – *M*=19.42, sd=8.23, and with both parents from rural communities – *M*=18.64, sd=6.57. In Moldova, the highest score was achieved by participants with "mixed" parents – *M*=23.67, sd=10.76, and the lowest by those with "both urban" parents – *M*=20.83, sd=8.38, with those with parents from rural areas in between the other two groups – *M*=22.94, sd=9.54. In Canada, those with both parents from urban areas scored the highest mean – *M*=25.80, sd=8.44, followed by those with both parents from rural areas – *M*=24.33, sd=7.51, and

PLOT 40. PARENTS' ORIGIN



"mixed" – *M*=23.84, sd=8.97. Note that a considerable difference of means between those whose both parents were from urban areas and those with at least one from rural communities can be observed in Siberia.

Multivariate Analysis of variance (Appendix A, Table 49) indicated that there was significant difference between PARENTS' ORIGIN parameters on the set of four variables: **noun-titles**, **modifiers**, **verbs**, and **items pooled** (F=2.825, df=6, p<0.01). Significant differences were also observed between AREAS on the same set of variables (F=3.833, df=12, p<0.001). Multivariate Analysis for this section indicated that there was no significant interaction of two factors, i.e., PARTENTS' ORIGIN and AREA (F=4.871, df=12, p<0.001).

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for the variable of **modifiers** and **verbs**; differences between PARENTS' ORIGIN, however, were not significant (Appendix A, Table 50). The analyses revealed no significant interaction of two factors, i.e., AREAS and PARENTS' ORIGIN, in all categories of data.

The Bonferroni Post hoc tests revealed the existence of significant differences between AREAS only in **modifiers** (Table 30T): participants from Krasnoyarsk used significantly less masculine gender than participants from Edmonton and Minsk. Participants from Moscow used significantly fewer masculines than participants from Minsk in **verbs**. These results are consistent with the results of the analysis (in the section of **modifiers** and **verbs**) when only study areas were compared and not correlated to other social factors.

TABLE 30T. PARENTS' ORIGIN BY AREA
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
MODIFIERS	Belarus	Siberia	1.3905	.3756	.002	.3309	2.4500
	Canada	Siberia	1.8835	.3674	.000	.8469	2.9201
VERBS	Belarus	Russia	-.7208	.2519	.044	-1.4313	-.10301

Based on observed means.
The mean difference is significant at the .05 level.

Thus, the results from this section of analysis indicate that Hypothesis 10 cannot be confirmed. The data of means from this set allow us to observe that participants with both parents from rural areas were different from those who had at least one parent from urban communities, the latter acquiring more masculine in **noun-titles** and **modifiers**, but less masculine in **verbs**. However, this difference of means did not reach the level of significance. We may assume that the parents' origin could not significantly influence the responses of participants because those parents who were born in rural areas most likely later moved to urban communities and lived with their children, which was a common tendency in the former Soviet Union, and thus were influenced by the language use there.

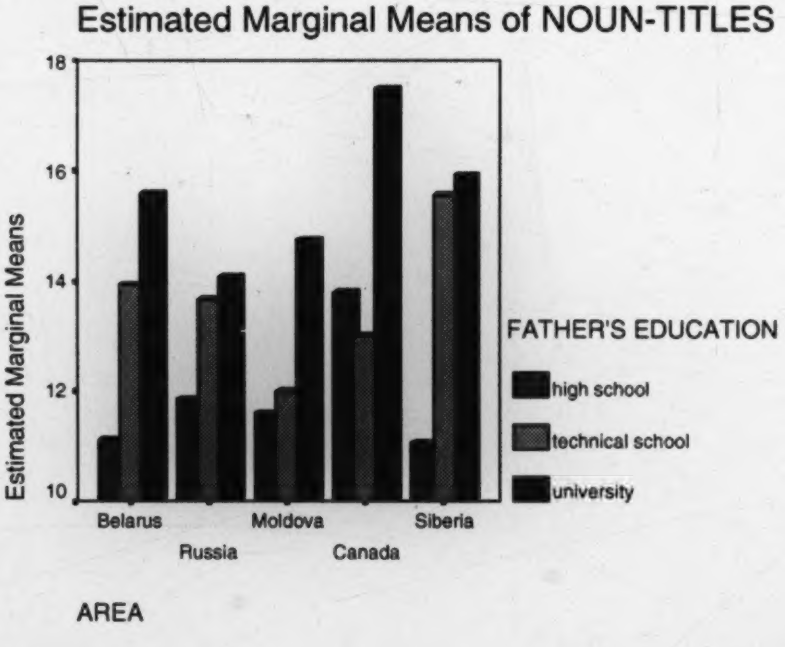
4.2.11. Father's education

On the basis of data provided by participants in the questionnaires concerning the education level of their parents, it was decided to test the influence of parents' education separately for each parent. According to the level of father's education the following groups were defined (Appendix A, Table 51): participants whose fathers had a high school level of education or less (189 cases), those whose fathers' education was at the technical school level (64 cases), and those whose fathers had a completed or non-completed university degree (217 cases).

The data of Descriptive Statistics (Appendix A, Table 52) reveal that total means for all study areas increase with the higher level of education in three groups of data: **noun-titles** (M=12.09, sd=6.42/high school, M=13.45, sd=5.53/technical school, and M=15.71, sd=5.70/university), **modifiers** (M=7.37, sd=2.80, M=7.97, sd=2.15, and M=8.04, sd=2.38, respectively), and **items pooled** (M=20.83, sd=8.43, M=22.88, sd=6.44, and M=25.15, sd=7.00, respectively). In **verbs**, however, the distribution was different: participants with father's education of high school level had a mean of M=1.36, sd=1.71), those with father's education of the university level – M=1.40, sd=1.83, and those with father's education at the technical school level – *M*=1.45 (sd=1.61). Profile Plots 41-44 allow us to notice that in three sets of data (**items pooled, modifiers**, and **noun-titles**) the means for participants whose fathers had a lower level of education generally were lower than those for participants with father's education at a higher level in all study areas.

The data for **noun-titles** (Plot 41) reveals that in all five areas participants whose parents had university education acquired the highest means: for Belarus – *M*=15.59, sd=5.70, for Moscow – *M*=14.07, sd=5.42, for Chisinau – *M*=14.75, sd=5.33, for Edmonton – *M*=17.49, sd=6.48, for Krasnoyarsk – *M*=15.91, sd=4.38. Then in four areas participants with father's education at the technical school level occupied the second position: for Belarus – *M*=13.92, sd=5.51, for Moscow – *M*=13.67, sd=4.40, for Moldova – *M*=12.00, sd=6.21, for Krasnoyarsk – *M*=15.56, sd=5.41, followed by those with fathers' education at high school level: for Belarus – *M*=11.11, d=5.14, for

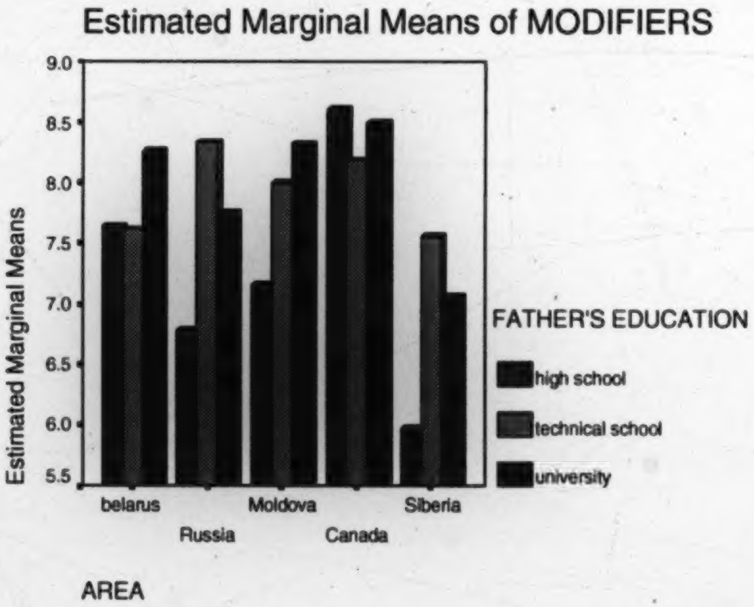
PLOT 41. FATHER'S EDUCATION



Moscow – *M*=11.84, sd=6.02, for Chisinau *M*=11.59, sd=6.87, and for Krasnoyarsk – *M*=11.06, sd=5.73. In Edmonton, participants with father's education at high school level obtained the mean of *M*=13.79, sd=7.10, and at technical school level slightly lower mean of *M*=13.00, sd=6.34. It is worthwhile noting that the means for "university" are consistently and considerably higher than those for "high school" in all areas. In addition to that, in three areas (Belarus, Moscow and Krasnoyarsk), the means for "university' and "technical school" are considerably higher than those for "high school".

In the category of **modifiers** (Plot 42) a quite similar picture can be observed. In three areas out of five (Moscow, Moldova, and Siberia) the means for participants with father's education at high school level were considerably lower than for the other two groups: *M*=6.78, sd=2.99, *M*=7.16 sd=3.18, and *M*=5.97, sd=2.78, respectively. In Moscow and Krasnoyarsk, participants with father's education at the technical school

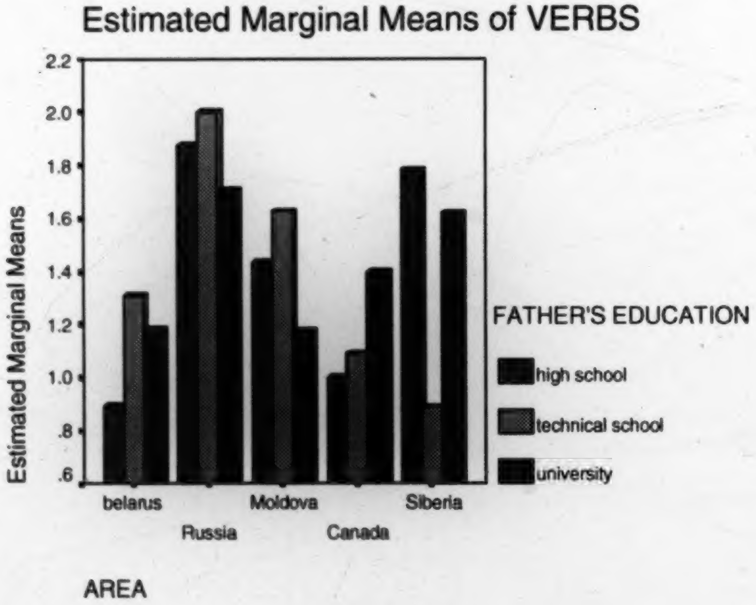
PLOT 42. FATHER'S EDUCATION



level had the highest means: *M*=8.33 (sd=1.35) and *M*=7.56 (sd=1.13), respectively, while those with the father's education at the university level scoring lower: *M*=7.76 (sd=3.00) and *M*=7.06 (sd=1.94), respectively. In Moldova, the last two groups showed a different distribution of means: "university" – *M*=8.32 (sd=2.44) and "technical school" – *M*=8.00 (sd=2.90). In Belarus, those with father's education at the university level scored the highest mean *M*=8.23 (sd=2.02), while the other two groups had practically equal means: *M*=7.64 (sd=2.38) and *M*=7.61 (sd=2.50). In Edmonton, there was almost no difference of means between the three groups.

The data for **verbs** (Plot 43) showed a considerable variation among the areas. In Belarus Russia, and Moldova, participants with father's education at the technical school level had the highest means: *M*=1.31 (sd=1.65), *M*=2.00 (sd=2.10) and *M*=1.62 (sd=1.54), respectively. In Moscow and Moldova, those with father's education at high school level were on the second position (*M*=1.87, sd=1.83, and *M*=1.43, sd=2.00) followed by those with fathers having a university degree (*M*=1.70,

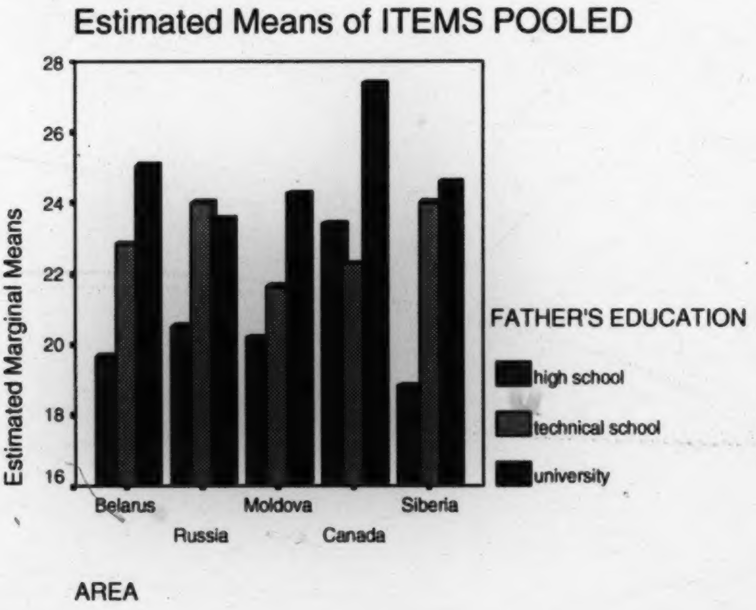
PLOT 43. FATHER'S EDUCATION



sd=1.74, and *M*=1.18, sd=1.93). In Belarus, the last two indices were reversed: *M*=0.89, d=1.10 for 'high school' and *M*=1.18, sd=1.86 for "university". In Canada, those with father's education at the university level had the highest mean (1.39, sd=1.96) and were followed by those with fathers having technical school education (*M*=1.09, sd=1.22) and high school education (*M*=1.00, sd=1.59). In Krasnoyarsk, the situation is quite different: participants whose fathers have technical school education have considerably lower mean (*M*=0.89, sd=1.05) than those with fathers having a university degree (*M*=1.62, sd=1.61) and high school education (*M*=1.78, sd=1.60). Note that responses in all three groups in Russia have considerably higher means than in Belarus. With this variation in data it seems impossible to establish a trend in responses.

For **items pooled** (Plot 44) in four study areas out of five (Belarus, Moscow, Moldova and Krasnoyarsk) the Estimated Marginal Means for participants with father's education only at a high school level were lower than the means for the other two

PLOT 44. FATHER'S EDUCATION



groups: *M*=19.64 (sd=5.21) for Belarus, *M*=20.50 (sd=8.76) for Moscow, *M*=20.18 (sd=7.57) for Moldova, and *M*=18.81 (sd=7.65) for Siberia. In three areas (Belarus, Moldova and Krasnoyarsk) participants whose fathers' education was at the university level scored the highest means: *M*=25.03 (sd=6.48), *M*=24.25 (sd=7.13), and *M*=24.59 (sd=5.40), respectively, while the means for participants with father's education at the technical school level were lower: *M*=22.85 (sd=6.31), *M*=21.63 (sd=7.57) and *M*=24.00 (sd=5.22), respectively. In the Moscow area, participants with father's education at the technical school level scored a slightly higher mean than those with father's education at the university level: *M*=24.00 (sd=4.54) *versus* *M*=23.54 (sd=7.25). In Canada, participants with father's education at the university level had a considerably higher mean (*M*=27.38, sd=7.87) than those with father's education at a high school level (*M*=23.40, sd=8.28) and technical school level (*M*=22.27, sd=8.44). Note that in Belarus Moscow and Krasnoyarsk the difference of means between "high school" and higher level of education is quite significant.

Multivariate Analysis of variance (Appendix A, Table 53) indicated that there was a significant difference between LEVELS OF FATHER'S EDUCATION on the set of four variables: **noun-titles**, **modifiers**, **verbs**, and **items pooled** (F=6.691, df=6, p<0.001). In addition, significant differences were observed between AREAS on the same set of variables (F=2.308, df=12, p<0.005). Multivariate Analysis for this section also indicated that there was no significant interaction of two factors, i.e., FATHER'S EDUCATION and AREA.

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for the variable of **modifiers,** and differences between LEVELS OF FATHER'S EDUCATION were significant in **noun-titles, modifiers** and **items pooled** (Appendix A, Table 54).

The Bonferroni Post hoc tests revealed the existence of significant differences between AREAS only in **modifiers** (Table 31T): participants from Krasnoyarsk used significantly less masculine gender than participants from Minsk. Participants from Moscow used significantly less masculine than participants from Edmonton. These results are consistent with the results of the analysis (in the section of **modifiers**) when only study areas were compared and not correlated to other social factors.

TABLE 31T. FATHER'S EDUCATION BY AREA
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
MODIFIERS	Belarus	Siberia	1.3565	.3749	.003	.2989	2.4141
	Russia	Canada	-1.0128	.3478	.038	-1.9939	-.31750
	Cana	Siberia	1.8595	.3646	.000	.8310	2.8879

Based on observed means.
The mean difference is significant at the .05 level.

The Bonferroni Post hoc tests allow us to review the significant differences between LEVELS OF FATHER'S EDUCATION on masculine **noun-titles**, **modifiers**, and **items pooled** (Table 32T). For **noun-titles**, participants with father's education at the university level used significantly more masculine gender than those with father's education only at high school and those with father's education at the technical school level. In **modifiers**, participants with father's education at the university level used significantly more masculine gender than those with father's education only at high school level. Finally, in **items pooled**, participants with father's education at the university level used significantly more masculine gender than those with father's education only at high school level.

TABLE 32T. FATHER'S EDUCATION
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) FATHER'S EDUCATION	(J) FATHER'S EDUCATION				Lower Bound	Upper Bound
NOUN-TITLES	high school	university	-3.6197	.5913	.000	-5.0406	-2.1989
	technical school	university	-2.2566	.8454	.024	-4.2879	-.2252
MODIFIERS	high school	university	-.6711	.2452	.019	-1.2604	-.81829
ITEMS POOLED	high school	university	-4.3267	.7456	.000	-6.1183	-2.5351

Based on observed means.
The mean difference is significant at the .05 level.

On the basis of the result from this section of the analysis we may claim that Hypothesis 11 is confirmed for the categories of **noun-titles** and **modifiers**, i.e., father's education level significantly influences the choice of gender in participants.

4.2.12. Mother's education

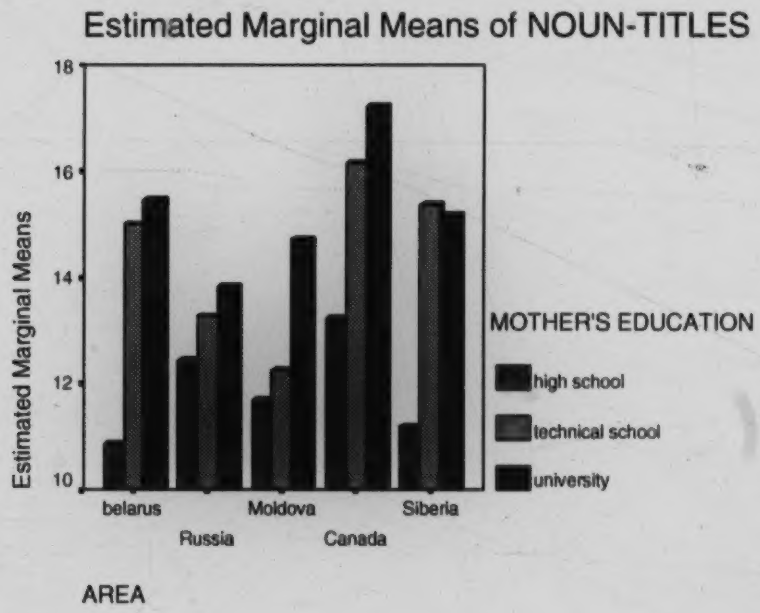
The following groups, as for the groups in the analysis of the influences of the father's education, were established for the analysis of importance of this factor (Appendix A, Table 55): participants whose mother's education was at the level of high school or less (186 cases), those with the mother's education at the technical school level (85 cases), and those whose mothers had a completed or nearly completed university/institute degree (206 cases).

Observation of total means for all areas combined in the data of Descriptive Statistics (Appendix A, Table 56) show that in 3 sets of data out of 4, i.e., **noun-titles**, **modifiers**, and **items pooled**, the indices increase with the increase of the level of mother's education of participants. Thus, in **noun-titles** subjects with mother's education at high school level had the mean of M=12.01, sd=6.31, subjects with mother's education at technical school level – M=14.19, sd=5.49, and subjects whose mothers had higher education – M=15.49, sd=5.89). For **modifiers**, the difference of means was not as pronounced as for noun-titles: participants whose mothers had high school education had a mean of M=7.21 (sd=2.80), while the other two groups scored almost equal means (M=8.06, sd=2.27/technical school and M=8.06, sd=2.33/university). For **items pooled**, those with mother's education at high school level had a mean of M=20.60 (sd=8.15), those with technical school level – M=23.74 (sd=6.58) and those with the university level – M=24.94 (sd=7.28). In **verbs**, the difference in means was not high: participants with the mother's education at technical school level had the highest mean (M=1.49, sd=1.71) while the other two groups had equal means: M=1.38 although differed in standard deviation (sd=1.72, and sd=1.79).

Observation of Profile Plots (Plots 45-48) allows us to notice that in 3 sets of data out of 4, i.e., **items pooled**, **modifiers**, and **noun-titles**, the Estimated Marginal Means for those participants whose mothers had only high school education were the lowest in all areas than the means for the other two groups. In the sets of **items pooled** and **noun-titles**, in 4 areas out of 5, the participants whose mothers had university education had the highest means while those whose mothers had technical school education had means had lower means.

The distribution of means for **noun-titles** in 5 study areas is presented on Plot 44. The lowest means of masculine in all 5 study areas were scored by participants whose mothers' education was at high school level: *M*=10.85.sd=4.94 for Belarus, *M*=12.44, sd=5.98 for Moscow, *M*=11.67, sd=6.68 for Moldova, *M*=13.22, sd=7.27 for Edmonton, and *M*=11.18, sd=5.56 for Krasnoyarsk. In four areas, Belarus, Moscow,

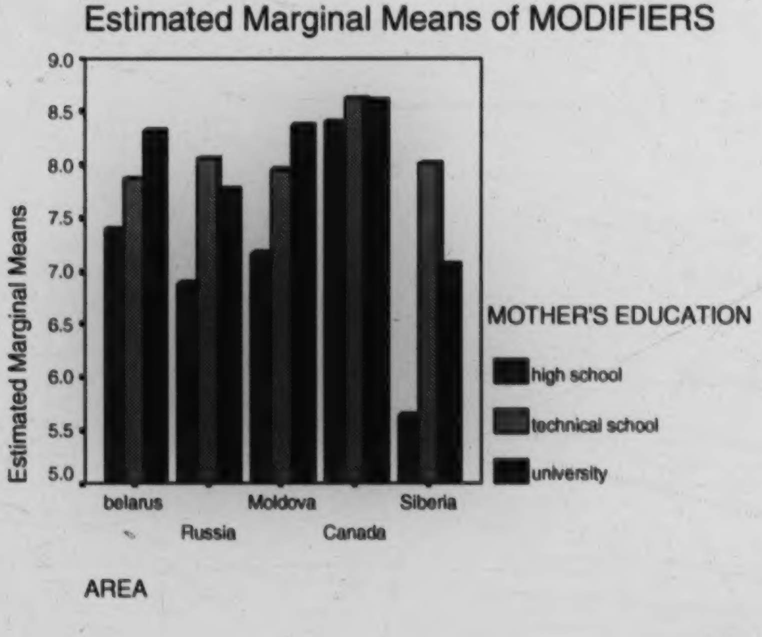
PLOT 45. MOTHER'S EDUCATION



Chisinau and Edmonton, participants with mothers' education at university level had the highest means (and differed considerably from the means for "high school"): *M*=15.46, sd=5.64, *M*=13.81, sd=5.72, *M*=14.72, sd=5.58, and *M*=17.22, sd=6.53, respectively, and were followed by means for participants whose mothers had technical school education: *M*=15.00, sd=5.57, *M*=13.26, sd=4.36, *M*=12.25, sd=6.42, and *M*=16.15, sd=5.50 respectively. In Krasnoyarsk, participants whose mothers had technical school education and university education scored almost equal means: *M*=15.36, sd=4.70, and *M*=15.17, sd=5.20. It is interesting to note that in Belarus, Canada and Siberia the means for 'high school" were considerably lower than the means for the other two groups.

In the category of **modifiers** (Plot 46), participants whose mothers had only high school education in all five study areas obtained lower means than the other two groups (cf. *M*=7.39, sd=2.51 for Minsk, *M*=6.87, sd=2.88 for Moscow, *M*=7.16, sd=3.33 for Chisinau, *M*=8.40, sd=2.19 for Edmonton and *M*=5.64, sd=2.28 for

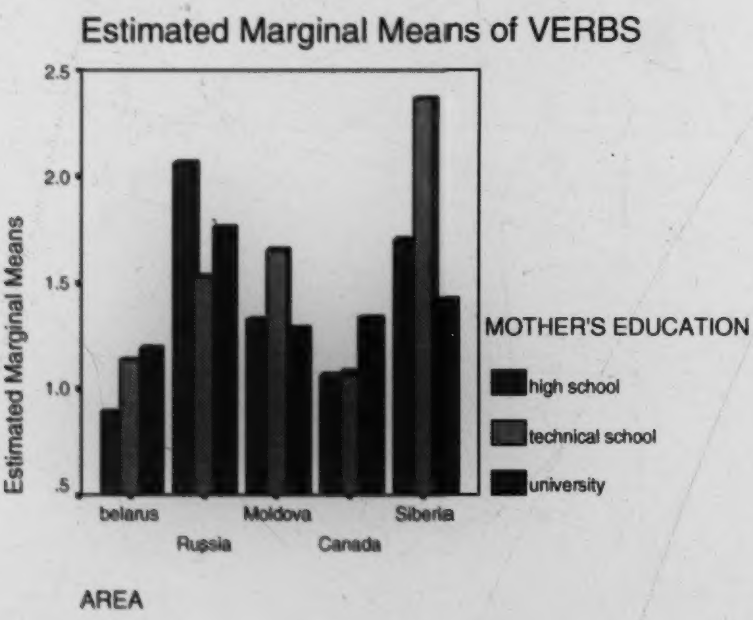
PLOT 46. MOTHER'S EDUCATION



Krasnoyarsk. Note that there is a significant difference of means for the last two areas, with more masculine forms used by participants from Edmonton. In Belarus and Moldova participants with their mother's education at university level had higher means than those with their mother' education at technical school level: *M*=8.31, sd=1.85 *versus* *M*=7.86, sd=2.47 in Belarus, and *M*=8.36, sd=2.13 *versus* *M*=7.95, sd=2.78 in Moldova. In Moscow, Edmonton and Krasnoyarsk the situation was reversed: participants whose mothers had technical school education obtained higher means than those with the university degrees. However, only in Krasnoyarsk was this difference considerable: *M*=8.00, sd=1.41 *versus* *M*=7.06, sd=2.28. It is interesting to note that the mean for "high school" for Edmonton, similarly to the previous section, is considerably higher than that for Krasnoyarsk. In addition to that, let us note that in four areas (Belarus, Moscow, Moldova and Krasnoyarsk, the means for "high school" are considerably lower than the means for the other two groups.

In the category of **verbs** (Plot 47) one may observe a considerable variation in the five study areas. It is noticeable that the means for all three groups seem to be higher in

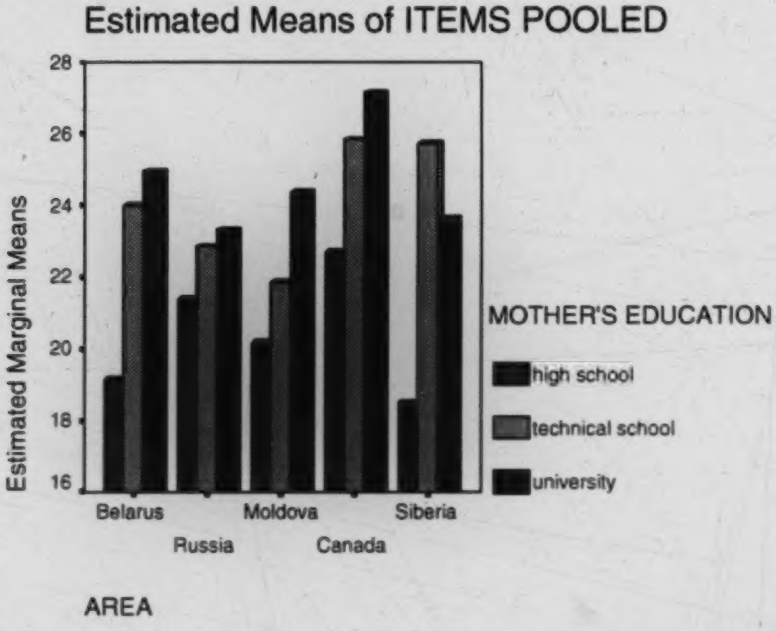
PLOT 47. MOTHER'S EDUCATION



Moscow and Krasnoyarsk than in Belarus and Canada with Moldova occupying an intermediate position. Other than that it is hard to discern a trend in responses. In Moldova and Siberia, participants whose mother's education was at technical school level scored the highest means, differing quite considerable from the other two groups: *M*=1.65, sd=1.90/technical school versus *M*=1.32.sd=1.92/high school, and *M*=1.65, sd=1.90/university for Moldova, and *M*=2.36, sd=1.85/technical school *versus* *M*=1.70, sd=1.69/high school and *M*=1.42, sd=1.32/university. In Belarus and Canada, the situation seems to be reversed: the highest means are found for participants with mother's education at university level: *M*=1.19, sd=1.89 and *M*=1.33, sd=1.94, respectively, while the other two groups scored less: *M*=1.13, sd=1.61/technical school, and *M*=0.89. sd=1.10/high school for Belarus, and *M*=1.08, sd=1.19/technical school and *M*=1.06, sd=1.64 for Canada. In Moscow study area, the highest mean was for participants with mother's education at high school level (*M*=2.06, sd=1.88) with participants whose mothers had university education on the second position (*M*=1.76, sd=1.80) and those with technical school education on the third position (*M*=1.53, sd=1.78).

For **items pooled** (Plot 48), the means for participants with mothers' education at high school level were as follows: *M*=19.14, sd=5.16 in Belarus, *M*=21.38, sd=8.23 in Moscow, *M*=20.16, sd=9.69 in Chisinau, *M*=22.68, sd=8.77 in Edmonton, and *M*=18.51, sd=6.40 in Krasnoyarsk. It is interesting to note that the means for Belarus and Siberia are considerably lower than the mean for Edmonton. In Belarus, Moscow, Moldova, and Canada, participants whose mothers had university degrees had the highest means (*M*=24.93, sd=6.38, *M*=23.32, sd=8.23, *M*=24.36, sd=7.25, and *M*=27.15, sd=7.69, respectively), and were followed by those with mother's education at the technical school level (*M*=24.00, sd=6.23, *M*=22.84, sd=4.50, *M*=21.85, sd=8.46, and *M*=25.85, sd=7.02, respectively). In Krasnoyarsk, however, participants whose mother's education was at technical school level scored higher mean than those with mothers having university degrees (*M*=25.73, sd=5.59, and *M*=23.64, sd=6.43). It worthwhile noting that in Belarus, Edmonton and Krasnoyarsk there is a significant difference in means between the participants whose mother's education was at high school level and the other two groups.

PLOT 48. MOTHER'S EDUCATION



Multivariate Analysis of variance (Appendix A, Table 57) indicated that there was a significant difference between LEVELS OF MOTHER'S EDUCATION on the set of four variables: **noun-titles**, **modifiers**, **verbs**, and **items pooled** (F=6.667, df=6, p<0.001). In addition, significant differences were observed between AREAS on the same set of variables (F=3.208, df=12, p<0.001). Multivariate Analysis for this section also indicated that there was no significant interaction of two factors, i.e., MOTHER'S EDUCATION and AREA.

A series of Univariate analyses of variance indicated that the differences between AREAS were significant for the variable of **modifiers** and **verbs.** Differences between LEVELS OF MOTHER'S EDUCATION were significant in **noun-titles, modifiers** and **items pooled** (Appendix A, Table 58).

The Bonferroni Post hoc tests revealed the existence of significant differences between AREAS only in **modifiers** (Table 33T); participants from Krasnoyarsk used significantly less masculine gender than participants from Minsk, Chisinau and Edmonton. Participants from Moscow used significantly less masculine than participants from Edmonton. These results are consistent with the results obtained for the factor of father's education. Participants from Minsk used significantly more masculine gender in **verbs** than participants from Moscow. These results are consistent with the results of the analysis (in the section of **modifiers** and **verbs**) when only study areas were compared and not correlated to other social factors.

TABLE 33T. MOTHER'S EDUCATION BY AREA

Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
MODIFIERS	Belarus	Siberia	1.3712	.3647	.002	.3425	2.3998
	Russia	Canada	-1.0128	.3460	.036	-1.9888	-.03680
	Moldova	Siberia	1.0818	.3788	.045	.01330	2.1503
	Canada	Siberia	1.9128	.3558	.000	.9093	2.9163
VERBS	Belarus	Russia	-.7220	.2527	.045	-1.4347	-.09364

Based on observed means.
The mean difference is significant at the .05 level.

The Bonferroni Post hoc tests allow reviewing significant differences between LEVELS OF MOTHER'S EDUCATION on masculine **noun-titles**, **modifiers**, and **items pooled** (Table 34T). In all three categories, participants with mother's education at high school level used significantly less masculine than those with mother's education at technical school level and university level.

Comparison of Estimated of Marginal Means and results of Multivariate Tests for Father's Education and Mother's Education allows us to see a lot of similarities for these two factors especially in the categories of **noun-titles**, **modifiers**, and **items pooled**. Even in the category of **verbs** the picture reveals the same trends except for subjects with mother's technical school education in Siberia, which was considerably higher. Nevertheless, it seems that the data for Mother's Education give more clear-cut

TABLE 34T. MOTHER'S EDUCATION
Multiple Comparisons
Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) MOTHER'S EDUCATION	(J) MOTHER'S EDUCATION				Lower Bound	Upper Bound
NOUN-TITLES	high school	technical school	-2.1775	.7804	.016	-4.0527	-.3023
		university	-3.4747	.6029	.000	-4.9234	-2.0260
	technical school	high school	2.1775	.7804	.016	.3023	4.0527
MODIFIERS	high school	technical school	-.8491	.3211	.025	-1.6206	-.07771
		university	-.8631	.2480	.002	-1.4591	-.2672
	technical school	high school	.8491	.3211	.025	.07771	1.6206
ITEMS POOLED	high school	technical school	-3.1390	.9769	.004	-5.4863	-.7917
		university	-4.3347	.7547	.000	-6.1482	-2.5213
	technical school	high school	3.1390	.9769	.004	.7917	5.4863

Based on observed means.
The mean difference is significant at the .05 level.

representation of dependence of gender choice on this particular factor as compared to the data on Father's Education. Thus, we may assume that the influence of the factor of Mother's Education is greater than that of Father's Education. The results from this section of the analysis confirm Hypothesis 11, that parents' education significantly influences gender differentiation in responses of participants.

4.3. Analysis of Corpus Parameters

It is natural to assume that not only social factors influence gender differentiation in occupational and personal titles. The structure and composition of sentences in which titles are used are important. In addition, not all titles behave similarly. The choice of gender may depend on morphological properties of individual words. Thus, in the following sections, we will try analyze these particular aspects. It was chosen to implement, besides *t*-tests, two other methods of the data analysis, namely Factor Analysis and Cluster Analysis. In contrast to the multivariate *t*-tests, used in the previous sections, which reveal significant differences in responses, Factor Analysis and Cluster Analysis investigate similarities in responses, and while the former establishes trends in them, the latter groups items into certain classes. Despite different statistical procedures used in these two methods of data analysis, they may produce converging results.

4.3.1. Factor Analysis

To compare the individual items used in the questionnaires for the present study, factor analysis of items was conducted in which responses for each item were correlated. The Correlation Matrix (Appendix A, Table 59) displays which particular items behaved similarly in the present study. Thus:

- Item #2 (***новый/-ая педагог***) correlated well (>0.3) with items: #6 (***участковый/-ая врач***), #12 (***молодой/-ая мастер***), #14 (***хороший/-ая референт***), #31 (***свой/-ая парикмахер***), #33 (***строгий/-ая комендант***).

- Item # 5 (***преподаватель/-ница***) correlated with items #47 (***оппонент/-ка***) and #57 (***корреспондент/-ка***).

- Item # 6 (*участковый/-ая врач*) correlated with item #2 (*новый/-ая педагог*), #12 (*молодой/-ая мастер*), #14 (*хороший/-ая референт*), #31 (*свой/-ая парикмахер*), #33(*строгий/-ая комендант*), #67 (*энергичный/-ая директор*).

- Item #7 (*студент/-ка*) correlated with item #24 (*отличник/-ца*) and #36 (*виновник/-ца*).

- Item #9 (*министр прилетел/-а*) correlated with item #55 (*врач-рентгенолог был/-а*).

- Item #11 (*учитель/-ница*) correlated with item #7 (*студент/-ка*).

- Item #12 (*молодой/-ая мастер*) correlated with items #2 (*новый/-ая педагог*), #6 (*участковый/-ая врач*), #14 (*хороший/-ая референт*), #16 (*первый/-ая стажер*), #50 (*известный/-ая филолог*), and #67 (*энергичный/-ая директор*).

- Item #14 (*хороший/-ая референт*) correlated with items #2 (*новый/-ая педагог*), #6 (*участковый/-ая врач*), #12 (*молодой/-ая мастер*), #16 (*первый/-ая стажер*), #31 (*свой/-ая парикмахер*), #50 (*известный/-ая филолог*), #62 (*безусловный/-ая автор*), and #67 (*энергичный/-ая директор*).

- Item #16 (*первый/-ая стажер*), correlated with items #12 (*молодой/-ая мастер*), #14 (*хороший/-ая референт*), #50 (*известный/-ая филолог*), #67 (*энергичный/-ая директор*).

- Item #19 (*уполномоченный/-ая*) correlated with #21 (*ученый/-ая*).

- Item #23 (*лаборант/-ка*) correlated with items # 26 (*энтузиаст/-ка*), #35 (*дебютант/-ка*), and #57 (*корреспондент/-ка*).

- Item #26 (*энтузиаст/-ка*) correlated with items #23 (*лаборант/-ка*), #30 (*кассир/-ша*), #35 (*дебютант/-ка*), #42 (*патриот/-ка*), #48 (*ассистент/-ка*), #57 (*корреспондент/-ка)*, and #68 (*оптимист/-ка*).

- Item #28 (*партнер/-ша*) correlated with item #35 (*дебютант/-ка*). Item #30 (*кассир/-ша)* correlated with item #26 (*энтузиаст/-ка*).

- Item #31 (*свой/-ая парикмахер*) correlated with items # 2 (*новый/-ая педагог*), #6 (*участковый/-ая врач*), #14 (*хороший/-ая референт*), and #67 (*энергичный/-ая директор*).

- Item #33 (*строгий/-ая комендант*) correlated with items #2 (*новый/-ая педагог*), #6 (*участковый/-ая врач*), and #67 (*энергичный/-ая директор*).

- Item #35 (*дебютант/-ка*) correlated with items #23 (*лаборант/-ка*), #26 (*энтузиаст/-ка*), #28 (*партнер/-ша*), #42 (*патриот/-ка*), and #51 (*претендент/-ка*).

- Item 36 (*виновник/-ца*) correlated with items #7 (*студент/-ка*) and #24 (*отличник/-ца*).

- Item #42 (*патриот/-ка*) correlated with items #26 (*энтузиаст/-ка*), #35 (*дебютант/-ка*), #51 (*претендент/-ка*), and #68 (*оптимист/-ка*).

- Item #47 (*оппонент/-ка*) correlated with item #5 (*преподаватель/-ница*).

- Item #48 (*ассистент/-ка*) correlated with item #26 (*энтузиаст/-ка*).

- Item #49 (*председатель открыл/-а*) correlated with item #59 (*синоптик заболел/–а*).

- Item #50 (*известный/-ая филолог*) correlated with items #14 (*хороший/-ая референт*), #16 (*первый/-ая стажер*), and #67 (э*нергичный/-ая директор*).

- Item #51 (*претендент/-ка*) correlated with items #35 (*дебютант/-ка*), #42 (*патриот/-ка*), and #68 (*оптимист/-ка*).

- Item #55 (*врач-рентгенолог был/-а*) correlated with items #9 (*министр прилетел/-а*) and #64 (*ревизор приехал/-а*).

- Item #57 (*корреспондент/-ка*) correlated with items #5 (*преподаватель/-ница*), #23 (*лаборант/-ка*), and #26 (*энтузиаст/-ка*).

- Item #59 (*синоптик заболел/–а*) correlated with items #49 (*председатель открыл/-а*), #55 (*врач-рентгенолог был/-а*), and #60 (*редактор просмотрел/-ла*).

- Item #64 (*ревизор приехал/-а*) correlated with item #55 (*врач-рентгенолог был/-а*).

- Item #67 (*энергичный/-ая директор*) correlated with items #6 (*участковый/-ая врач*), #12 (*молодой/-ая мастер*), #14 (*хороший/-ая референт*), #16 (*первый/-ая стажер*), #31 (*свой/-ая парикмахер*), #33 (*строгий/-ая комендант*), and #50 (*известный/-ая филолог*).

- Item #68 (*оптимист/-ка*) correlated with items #26 (*энтузиаст/-ка*), # 42 (*патриот/-ка*), and #51 (*претендент/-ка*).

From the above correlations one may see that there exist certain similarities between items; they tend to form groups. Thus virtually all sentences including **modifiers** correlated well with each other. In addition, some **verbs** referring to masculine noun-titles of women (*министр прилетел/-а, ревизор приехал/-а, председатель открыл/-а, синоптик заболел/–а, врач-рентгенолог был/-а,* редактор *просмотрел/-ла*) tend to reveal similarities in responses. In **noun-titles**, certain items also reveal similarities in responses: *претендент/-ка, патриот/-ка, энтузиаст/-ка, оптимист/-ка, лаборант/-ка, корреспондент/-ка, дебютант/-ка*, and *ассистент/-ка*, as well as *виновник/-ца, отличник/-ца*. It is easy to notice that the former have morphological similarities while the latter, besides sharing morphological similarities, also represent the category of personal (but not professional) titles.

Factor analysis for Total Variance Explained revealed that there exist 14 relevant factors (extraction sums of squared loadings in total exceeding 1.0). The corresponding Scree Plot (Appendix A, Plot 49) indicates that only the first four factors display relevant differences in Eigenvalues, and, thus, should be selected for observation. The data from Rotated Component Matrix (Appendix A, Table 60) shows that Factor 1 (>0.300) puts the entries containing **modifiers** in one distinct group (#2, #6, #12, #14, #16, #31, #33, #50, #62, and #67). These data proves that the use gender for modifiers to maculine noun-titles is quite distinct from the the use of gender in **noun-titles** and past tense **verbs**. Factor 2 distinguishes the questionnaire items containing the **noun-titles**: #26 (*энтузиаст/-ка*), #28 (*партнер/-ша*), #35 (*дебютант/-ка*), #38 (*писатель/-ница*), #42 (*патриот/-ка*), #45 (*активист/-ка*), #51 (*претендент/-ка*), #52 (*акушер/-ка*), #68 (*оптимист/-ка*), #69 (*исполнитель/-ница*), and #71 (*практикант/-ка*). Factor 3 also singled sentences with the **noun-titles**: #5 (*преподаватель/-ница*), #7 (*студент/-ка*), #23 (*лаборант/-ка*), #26 (*энтузиаст/-ка*), #30 (*кассир/-ша*), #35 (*дебютант/-ка*), #47 (*оппонент/-ка*), and #57 (*корреспондент/-ка*). It is easy to notice that the majority of items, when combined by these last two factors (with the exception of only five items) have similarities in morphological composition, i.e., the feminine titles are formed with the suffix *–ка*. Thus we may draw a conclusion that for the category of **noun-titles**, the factor of morphological formation of words has an important influence. Factor 4 singled out 7 out of 10 **verbs** as having high degree of correlation: #3 (*геолог работал/–а*), #9 (*министр прилетел/–а*), #49 (*председатель открыл/–а*), #55 (*врач–рентгенолог был/–а*), #59 (*синоптик заболел/–а*), # 60 (*редактор просмотрел/–а*), and #70 (*директор приветствовал/–а*), which confirms the prediction that the tendencies of gender differentiation in **verbs** are different from other two categories.

4.3.2. Position of reference in the sentence

For the purposes of the present study, it was also decided to investigate differences due to proximity and position of the reference to gender.

4.3.2.1. Gender reference preceding or following

This parameter was tested for all items grouped together and separately for three categories: modifiers to masculine noun-titles, verbs referring to masculine noun-titles and noun-titles with two corresponding gender forms.

Paired Samples Statistics (Appendix A, Table 61) showed that for **noun-titles**, in cases when the reference preceded the item the obtained mean was *M*=0.536, sd=0.216 while when the reference was following it was *M*=0.538, sd=0.231. In **modifiers**, the mean for the cases when the gender reference preceded the item was *M*=0.279, sd=0.249, and the mean when the reference followed the item was *M*=0.227, sd=0.298. In **verbs**, the correlation of means was as follows: *M*=0.882, sd=0.195 for the instances when the reference was preceding the item, and *M*=0.841, sd=0.206, when the reference was following. Finally, in **items pooled** the mean for the cases when reference preceded the item being tested equal to *M*=0.531, sd=0.175, while in cases when the reference followed the item - *M*=0.571, sd=0.163

Paired Samples Tests and Paired Samples Correlations (Table 35T) revealed that significant differences were obtained in the categories of **modifiers**, **verbs**, and **items pooled**. In **modifiers** and **verbs** when the reference preceded the item, significantly more masculine gender was used. For **items pooled** the tendency was reversed.

The anterior position of the gender reference n category of **items pooled**, which consisted mostly of noun-titles, promoted the use of feminine, and this may be attributed to the fact that participants most likely felt that their choice of gender marked forms was not limited by structural constraints. In the categories of **modifiers** and **verbs**, however, it seems that when the gender reference preceded the item, and

TABLE 35T. POSITION OF REFERENCE

Paired Samples Test

		Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	NOUN-TITLES REFERENCE PRECEDING vs. FOLLOWING	-.0026808	.1793	.00819	-.01878	.01342	-.327	478	.744
Pair 1	MODIFIERS REFERENCE PRECEDING vs. FOLLOWING	.05208	.2424	.01106	.03034	.07382	4.708	479	.000
Pair 2	VERBS REFERENCE PRECEDING vs. FOLLOWING	.04037	.1974	.00900	.02268	.05806	4.484	480	.000
Pair 3	ITEMS POOLED REFERENCE PRECEDING vs. FOLLOWING	-.03974	.1402	.00641	-.05234	-.02715	-6.20	477	.000

thus participants clearly understood to which gender the item was attributed, they deemed it to be redundant to emphasize the gender again, or felt more reluctant to violate grammatical coordination of modifiers and verbs with the noun expressed in masculine gender.

4.3.2.2. Position and proximity of the gender reference

The items of the questionnaire were also tested on the factor of proximity of the gender reference to the tested items. The following pairs of data were established:

1) Sentences in which the gender of **noun-titles** was tested, and the reference to gender adjoined and preceded the tested item. The mean value in this case was *M*=0.527, sd=0.239 (Appendix A, Table 62).

   Sentences in which the gender of **noun-titles** was tested, and the reference to gender adjoined the tested item, but followed it. The mean value obtained for this set was *M*=0.546, sd=0.294.

2) Sentences in which the gender of **noun-titles** was tested, and the reference to gender was separated by other words from the tested item and preceded it. The mean obtained for this group was *M*=0.621, sd=0.222.

Sentences in which the gender of **noun-titles** was tested, and the reference to gender was separated by other words from the tested item and followed it. The mean value in this case was M=0.622, sd=0.324.

3) Sentences in which the gender of **modifiers** was tested with the reference to gender adjoining and preceding the tested item. The obtained mean was M=0.232, sd=0.299.

Sentences in which the gender of **modifiers** was tested with the reference to gender adjoining and anteceding the tested item (the noun being modified). The mean value for this set was M=0.225, sd=0.336.

4) Sentences in which the gender of **modifiers** was tested with the reference to gender being separated by other words from the tested item and preceding it. The mean obtained for this group of data was M=0.218, sd=0.294.

Sentences in which the gender of **modifiers** was tested with the reference to gender being separated by other words from the tested item (the noun being modified) and anteceding it. The mean value for this set constituted M=0.230, sd=0.340.

5) Sentences in which the gender of preterit **verbs** was tested, and the reference to gender adjoined and preceded the tested item. The mean for the use of masculine gender here constituted M=0.923, d=0.186.

Sentences in which gender of preterit **verbs** was tested with the reference to gender adjoining and following the tested item. The mean value obtained for this set constituted M=0.884, sd=0.213.

6) Sentences in which the gender of preterit **verbs** was tested with the reference to gender being separated by other words from the tested item and preceding it. The mean value obtained for this groups of data amounted to M=0.841, sd=0.291.

Sentences in which the gender of preterit **verbs** was tested with the reference to gender being separated by other words from the tested item and following it. The mean for the use of masculine gender constituted *M*=0.799, sd=0.261.

7) Sentences in which the gender reference adjoined and preceded the tested item (**items pooled** grouped together). The mean value of the use of the masculine gender for this category amounted to *M*=0.467, sd=0.157

   Sentences in which the gender reference adjoined the tested item, but followed it (**items pooled** grouped together). The mean of the use of the masculine for this group constituted *M*=0.494, sd=0.205.

8) Sentences in which the gender reference was separated by other words from the tested item, and preceded it (**items pooled** grouped together). The mean of the use of masculine for this group was *M*=0.494, sd=0.191.

   Sentences in which the gender reference was separated by other words from the tested item (**items pooled** grouped together) and followed it. The mean of the use of the masculine in this set was *M*=0.688, sd=0.197.

Paired Samples Tests (Table 36T) indicated the significant difference in responses was found in the following pairs: for **noun-titles**, in sentences where reference to gender was separated by other words and followed the tested item participants used significantly more masculine gender than when the reference was preceding; for **verbs**, in sentences where reference to gender adjoined and preceded the tested item participants used significantly more masculine gender than when the reference followed the item, and in sentences where reference to gender was separated by other words from the item, but preceded it, participants used significantly more masculine gender than when the reference followed the item; for **items pooled**, in sentences where reference to gender adjoined and followed the tested item, participants used significantly less masculine gender than when the reference was preceding, and in sentences where reference to gender was separated by other words and followed the tested item, participants used significantly less masculine gender than when the reference was preceding. For **modifiers** position of reference to gender does not appear to make a difference.

TABLE 36T. PROXIMITY OF GENDER REFERENCE
Paired Samples Test

		Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	NOUN-TITLES WITH REFERENCE ADJOINING AND PRECEDING vs. NOUN-TITLES WITH REFERENCE ADJOINING AND FOLLOWING	-.0192	.2757	.0126	-.0439	.0055	-1.527	479	.127
Pair 2	NOUN-TITLES WITH REFERENCE SEPERATED AND PRECEDING vs. NOUN-TITLES WITH REFERENCE SEPERATED AND FOLLOWING	-.0982	.2745	.0125	-.1228	-.0736	-7.836	479	.000
Pair 3	MODIFIERS WITH REFERENCE ADJOINING AND PRECEDING vs. MODIFIERS WITH REFERENCE ADJOINING AND FOLLOWING	.0069	.3289	.0150	-.0226	.0364	.463	479	.644
Pair 4	MODIFIERS WITH REFERENCE SEPERATED AND PRECEDING vs. MODIFIERS WITH REFERENCE SEPERATED AND FOLLOWING	-.0121	.2895	.0132	-.0381	.0138	-.919	480	.359
Pair 5	VERBS WITH REFERENCE ADJOINING AND PRECEDING vs. VERBS WITH REFERENCE ADJOINING AND FOLLOWING	.0395	.2341	.0107	.0185	.0605	3.701	480	.000
Pair 6	VERBS WITH REFERENCE SEPARATED AND PRECEDING vs. VERBS WITH REFERENCE SEPARATED AND FOLLOWING	.0412	.3021	.0138	.0142	.0683	2.993	480	.003
Pair 7	ITEMS POOLED WITH REFERENCE ADJOINING AND PRECEDING vs. ITEMS POOLED WITH REFERENCE ADJOINING AND FOLLOWING	-.0273	.1818	.0083	-.0436	-.0109	-3.282	478	.001
Pair 8	ITEMS POOLED WITH REFERENCE SEPARATED AND PRECEDING vs. ITEMS POOLED WITH REFERENCE SEPARATED AND FOLLOWING	-.1937	.2086	.0095	-.2124	-.1750	-20.343	479	.000

Thus, we may claim that the position of the reference to gender plays an important role for the choice of gender. If it is situated after the item in question there is more probability that the feminine gender will be used with the exception of preterit verbs, for which the trend seems to be the opposite: if the reference to gender is preceding

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(no matter if it is separated from the tested item by other words or not), more masculine forms will be used.

In the next section of our analysis we investigated how the distance from the gender reference influences the choice of masculine forms versus feminine. Paired Samples Test (Table 37T) indicated that when gender reference followed **noun-titles** and was separated from them by other words significantly more feminine gender was used by participants than when the reference adjoined the item. In **verbs**, when the gender reference adjoined the items, either proceeding or following, significantly more masculine gender was used than in cases with the gender reference separated by other words. The situation was reversed as compared to the above for **items pooled**: the participants used more feminine gender when the gender reference adjoined the item (no matter whether it preceded the item or followed it) than when it was separated by other words.

TABLE 37T. PROXIMITY OF GENDER REFERENCE
Paired Samples Test

		Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	NOUN-TITLES WITH REFERENCE PRECEDING JOINING VS. SEPARATED	.0035	.1807	.0083	-.0127	.0197	.421	478	.674
Pair 2	NOUN-TITLES WITH REFERENCE FOLLOWING JOINING VS. SEPARATED	-.0762	.3754	.0171	-.1099	-.0426	-4.453	480	.000
Pair 3	MODIFIERS WITH REFERENCE PRECEDING JOINING VS. SEPARATED	.0139	.2785	.0127	-.0111	.0388	1.091	480	.276
Pair 4	MODIFIERS WITH REFERENCE FOLLOWING JOINING VS. SEPARATED	-.0042	.3165	.0144	-.0326	.0242	-.288	479	.773
Pair 5	VERBS WITH REFERENCE PRECEDING JOINING VS. SEPARATED	.0821	.2941	.0134	.0558	.1085	6.125	480	.000
Pair 6	VERBS WITH REFERENCE FOLLOWING JOINING VS. SEPARATED	.0839	.2370	.0108	.0626	.1051	7.761	480	.000
Pair 7	ITEMS POOLED WITH REFERENCE PRECEDING JOINING VS. SEPARATED	-.0280	.1368	.0063	-.0403	-.0157	-4.477	478	.000
Pair 8	ITEMS POOLED WITH REFERENCE FOLLOWING JOINING VS. SEPARATED	-.1943	.2388	.0109	-.2157	-.1729	-17.829	479	.000

Thus, in general terms, the closer the gender reference was to the item the more feminine forms were used. This was especially pronounced in **noun-titles** when the gender reference followed them. **Verbs** display a different trend. It indicates that when the gender reference adjoined them the participants felt that the gender of the person in this case is clearly defined and were less inclined to break the rules of formal coordination than when the reference was separated by other words and there may have been more ambiguity.

4.3.3. Influence of a preterit verb in sentences with noun-titles and modifiers

Some sentences in the questionnaire, in which the use of gender was tested for noun-titles and modifiers, also contained a preterit verb in the feminine gender (see Section 4.0). In this section we will test the factor of influence of a preterit verb on the choice of gender in noun-titles and modifiers.

Sentences with **noun-titles** which contained a preterit verb in the feminine gender had a mean for the use of masculine gender of M=0.494, sd=0.229, while the sentences in which there was no past tense verbs had a mean of M=0.552, sd=0.222. For the sentences which tested **modifiers**, those with the past tense verbs acquired a mean for the masculine of M=0.239, sd=0.295, while those without past tense verbs had a mean of M=0.221, sd=0.266 (Appendix A.Table 63). One may see that the trend was reversed for these two groups. The sentences which tested the use of **modifiers** and countained preterit verbs in the feminine gender, obtained higher means for the use of masculine than the sentences with modifiers which did not contain past tense verbs. On the contrary, the sentences that tested the use of gender for **noun-titles** with two corresponding gender forms, and contained preterit verbs in the feminine gender, obtained lower means of the masculine gender as compared to the sentences without preterit verbs.

The results of the Paired Samples Correlations and Paired Samples Test and revealed that significant difference was reached only for **noun-titles** (Table 38T).

TABLE 38T. INFLUENCE OF PRETERIT VERB
Paired Samples Test

		Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	NOUN-TITLES WITH PRETERIT VERBS vs. WITHOUT	-.057815	.2012	.00919	-.075878	-.0397	-6.289	478	.000
Pair 2	MODIFIERS WITH PRETERIT VERBS vs. WITHOUT	.001163	.2283	.01042	-.008845	.03211	1.116	479	.265

Thus, in the category of **noun-titles**, the presence of feminine preterit verbs in the sentence enhanced the use of feminine gender in noun-titles.

4.3.4. True nouns versus substantivized adjectives

In the subset of **noun-titles** with two gender forms, some items in the questionnaires for the present study represented true nouns while others were substantivized adjectives or participles (e.g., *ученый/-ая*, *заведующий/-ая*, etc.). It was decided to test whether this factor influenced the choice of gender in noun-titles.

Paired Samples Statistics (Appendix A, Table 64) showed that the sentences with true nouns had a mean of masculine gender equal to 0.536, sd=0.218, while those with substantivized adjectives had 0.539, sd=0.266. Paired Samples Correlations and Paired Samples Test revealed (Table 39T) no significant differences between these two types of nouns.

TABLE 39T. TRUE NOUNS VS. SUBSTANTIVIZED
Paired Samples Test

	Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
TRUE NOUNS vs. SUBSTANTIVIZED	-.00256	.2702	.01235	-.02683	.02169	-.208	478	.835

4.3.5. Noun-titles with declinable specifiers

Some noun-titles with two corresponding gender forms in the questionnaire of the present study had declinable specifiers (adjectives, participles, or pronouns), e.g., наш/-а учитель/-ница "our (fem. or masc.) teacher (fem. or masc.)." It was decided to test whether their presence in the sentence influenced the choice of gender. According to the data from Paired Samples Statistics (Appendix A, Table 65), noun-titles with specifiers had a mean of the use of masculine gender equal to 0.499, d=0.269, while those without specifiers: 0.544, sd=0.216.

Paired Sample Test (Table 40T) indicated that the participants used significantly less masculine gender for the sentences that contained no declinable specifiers as compared to the sentences, which had a declinable specifier. Thus, we may deduce that presence of the declinable specifier in a sentence promotes the use of feminine gender in **noun-titles**.

TABLE 40T. PRESENCE OF DECLINABLE SPECIFIER
Paired Samples Test

	Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
SENTENCES WITH vs. WITHOUT SPECIFIERS	-.044927	.2474	.01130	-.067139	-.022715	-3.974	478	.000

4.3.6. Double reference versus single reference to gender

The sentences in the questionnaire for the present study were devised in such a way that some of them contained only one reference to the gender of the person while others contained double (and sometimes triple) reference. For simplicity, sentences with more than one reference to the gender of the person mentioned in the sentence were united into one group. Paired Samples Statistics (Appendix A, Table 66), shows that the mean of the use of masculine gender in the sentences with double reference constituted *M*=0.511, sd=0.171, while the mean for the sentences with single reference was *M*=0.569, sd=0.159.

Paired Samples Tests (Table 41T) revealed that the sentences with only single reference to gender used significantly more masculine as compared to the sentences with double reference. This result shows that the more the gender of the person is emphasized, the more probable that the feminine gender will be used.

TABLE 41T. DOUBLE REFERENCE VS. SINGLE REFERENCE TO GENDER
Paired Samples Test

	Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
DOUBLE REFERENCE vs. NO DOUBLE REFERENCE	-.058115	.1136	.005190	-.00683	-.04790	-11.188	477	.000

Thus, this portion of analysis allows confirming Hypothesis 12, i.e., that structural peculiarities of sentences, and some morphological properties of items influence gender differentiation.

4.4. Multiple comparisons of individual items as related to social factors

To investigate the behavior of items as related to the various social factors which were used in the present study (area of residence, age education, and social status), it was decided to review whether there were significant differences in responses of participants, and execute a series of *t*-tests.

4.4.1. Multiple comparisons of corpus items by study areas

Multivariate Analysis of variance (Appendix A, Table 67) indicated that there was a significant difference between AREAS on the set of three variables: **noun-titles**, **modifiers**, and **verbs** (F=4.428, df=120, p<0.001). Tests of Between-Subjects Effects (Appendix A, Table 68) indicated that significant differences between items as related to the factor of the study area were observed in the following instances: #3, #6, #7, #9, #14, #15, #16, #21, #24, #28, #33, #36, #38, #42, #50, #57, #60, #67, and #71.

Post hoc tests for Multiple Comparisons (Appendix A, Table 69) allow us notice that for **noun-titles** in four cases out of ten (#7 *студент/–ка*, #15 *чемпион/–ка*, #21 *ученый/–ая*, #24 *отличник/–ца*), participants from Krasnoyarsk used significantly less masculine gender than participants in Edmonton, Minsk and Moscow. In other 2 cases (#5 *преподаватель/–ница* and #28 *партнер/–ша*), on the contrary, participants from Krasnoyarsk used significantly more masculine than participants from Canada, Belarus, European Russia and Moldova (#5 *преподаватель/–ница*, and #7 *студент/–ка*). In 3 cases (#38 *писатель/–ница*, #42 *патриот/–ка*, and #71 *лаборант/–ка*) participants from Edmonton used significantly more masculine than participants from Chisinau, Moscow and Minsk. In one case (#57 *корреспондент/–ка*) participants from Edmonton and Minsk used significantly more masculine than participants form Chisinau. Thus, we may see that there is a considerable variation in individual items. Although in general this variation is consistent with the comparison of areas for items pooled, in some cases (#5 and #28) we observe opposite trends.

In **modifiers**, significant differences were observed in 6 items out of 10 (#6 *участковый/–ая врач*, #14 *хороший/–ая референт*, #16 *первый/–ая стажер*, #33 *строгий/–ая комендант*, #50 *известный/–ая филолог*, #67 *энергичный/-ая директор*). In all these cases participants from Krasnoyarsk (i.e., where the influence of other western languages seems to be less significant) the masculine gender was used significantly less as compared to other study areas. The most obvious contrast is observed in comparison of responses from Krasnoyarsk with responses from Edmonton and Minsk. The result of analysis for individual items is quite consistent with the results obtained for all items.

Finally, significant differences between individual items in **verbs** were observed only in two items out of 10 (#3 *фельдшер пришел/–а*, and #9 *министр прилетел/–а*). In the first instance participants from Krasnoyarsk used significantly more masculine gender than participants from Edmonton and Minsk; in the other instance participants from Moscow used significantly more masculine than participants from Minsk and Chisinau. Although a significant difference in this section was obtained only for two items it is consistent with the trend observed for all items in comparison of areas.

Thus, from this portion of analysis we may conclude that the trends observed in individual items are in most of the cases similar to the trends, which were observed when all items were tested together.

4.4.2. Multiple comparisons of individual items by age groups

Multivariate Analysis of variance (Appendix A, Table 70) indicated that there was a significant difference between AGE GROUPS in the set of three variables: **noun-titles**, **modifiers**, and **verbs** (F=2.935, df=150, p<0.001). Tests of Between-Subjects Effects (Appendix A, Table 71) show that significant differences were found in the majority of items: #5, #7, #10, #11, #12, #15, #17, #23, #24, #26, #28, #30, #33, #35, #36, #38, #40, #42, #44, #47, #48, #51, #52, #57, #63, #66, #68, #69, and #71.

Post hoc tests for Multiple Comparisons (Appendix A, Table 72) allow us observe that for **noun-titles** significant differences were observed in practically all cases (25 out of 30), and in only two **modifiers**. For items #17 (*поэт/-есса*) and #44 (*управляющий/-ая*), although Tests of Between-Subjects Effects indicated that a certain significant level of differences was achieved (F=6.62, p>0.030 and F=2.99, p>0.031), the Multiple Comparisons did not reveal significant difference.

In virtually all cases of **noun-titles** except items #26 (*энтузиаст/-ка*) and #71 (*практикант/-ка)* no contrast was found between the age groups of 17 to 25 and 26 to 35. In item #26, the age group 26 to 35 used significantly more masculine gender than younger participants, which is contrary to the general trend. In item #71 (*практикант/–ка*), the two age groups differed significantly, with younger participants using more masculine gender. Comparison of age groups of 17 to 25 and 26 to 35 with other age groups shows that that practically in all instances (except item #48 *ассистент/-ка*) older participants used less masculine gender. For item #48, participants in age group 36 to 45 used less masculine gender than older participants. This may be attributed to the fact that older participants viewed this noun-title as a highly prestigeous and opted for the use of masculine gender. The trend observed for individual items is consistent with the result of the analysis in which all items were grouped together. The fact that the use of masculine gender varies depending upon an item in the present study is consistent with Panov's (1968) and Krysin's (1974) observations. However, we may also claim that in individual items, despite differences, participants from the younger age groups used significantly more masculine gender.

In **modifiers**, participants of age group 17 to 25 used more feminine gender than participants of 36 to 45 years of age. This may allow us to say that in certain modifiers we may observe the trend to use more feminine forms in younger generation.

4.4.3 Multiple comparisons of individual items by the factor of education

Multivariate Analysis of variance (Appendix A, Table 73) indicated that there was a significant difference between LEVELS OF EDUCATION on the set of three variables: **noun-titles, modifiers**, and **verbs** (F=3.950, df=100, p<0.001). Tests of Between-Subjects Effects (Appendix A, Table 74) show that significant differences were found in a few items: #2, #6, #7, #10, #12, #14, #16, #17, #19, #21, #26, #28, #30, #31, #33, #40, #47, #48, #50, #57, #62, #67, and #71.

Post hoc tests for Multiple Comparisons (Appendix A, Table 75) allow us observe that for **noun-titles** significant differences were observed in 12 cases out of 30, and in all **modifiers**.

In 9 instances of **noun-titles** participants with university education used significantly more masculine gender than participants with high school and technical school education. In 2 instances (#7 *студент/-ка*, and #10 *учитель/-ница*), however, the trend was reversed. In one instance (#71 *практикант/-ка*), participants with high school education used significantly more masculine than participants with technical school education. This allows us to conclude that the use of gender forms by participants with different levels of education is not always uniform. The opposite trend in the use of gender in the three items indicated above may be explained by interference of other factors, primarily age (the majority of participants with only high school level of education represented young people). Despite these exceptions the trends in individual items is consistent with the trend for all items analyzed together.

The data for **modifiers** are consistent with the previous study of influence of education on the choice of gender for all items, i.e., the higher the educational level, the lower the use of feminine gender. Most of the contrast is found between participants with university level of education and those with high school education. The result of analyses for all items together and individual items allow us to claim that the influence of the factor of education is most significant in the gender differentiation of **modifiers**.

4.4.4. Multiple comparisons of individual items by the factor of social group

Multivariate Analysis of variance (Appendix A, Table 76) shows that there was a significant difference between SOCIAL GROUPS on the set of three variables: **noun-titles**, **modifiers**, and **verbs** (F=2.164, df=100, p<0.001). Tests of Between-Subjects Effects (Appendix A, Table 77) show that significant differences were found in a few items: #2, #5, #12, #14, #16, #23, #26, #30, #31, #33, #40, #47, #48, #49, #50, #57, #62, and #67.

Post hoc tests for Multiple Comparisons (Appendix A, Table 78) allow us to observe that significant differences were observed for **noun-titles** in 7 cases out of 30, in all **modifiers,** and only one **verb.** Although item #40 (*переводчик/-ца*) obtained a significant level of difference in the Test of Between-Subjects Effects, the adequate levels of significance were not achieved in Multiple Comparison Tests.

The Multiple Comparison tests reveal that significant difference observed in **noun-titles** contrasted responses of blue-collar background participants with intelligentsia and white-collar workers. In 6 instances (#23 *лаборант/–ка*, #26 *энтузиаст/–ка*, #30 *кассир/–ша*, #47 *оппонент/–ка*, #48 *ассистент/–ка*, and #57 *корреспондент/–*

ка) blue-collar worker used significantly less masculine gender than both intelligentsia and white-collar workers, and in instance #5 (*преподаватель/–ница*) blue-collar workers used significantly less masculine than white-collar workers only. No significant difference in these items was found between white-collar workers and intelligentsia.

In **modifiers** the trend was similar: blue-collar workers used significantly less masculine gender than both intelligentsia and white-collar workers. Only in two cases (#14 *хороший/-ая референт*, and #62 *безусловный/–ая автор*), were significant differences established between intelligentsia and white-collar workers, with the latter using significantly less masculine.

In the **verb** (#49 *синоптик заболел/–а*), significant differences were observed between blue-collar workers and white-collar workers, with the latter using significantly less masculine gender.

Results from this section indicate that the differences observed in individual items were consistent with the trend for all items taken together. Similarly to the factor of education, social status was predominantly significant in the gender differentiation of **modifiers**.

4.4.5. Multiple comparisons of items depending on the factor of participant residence at the age of 3 to 10

Multivariate Analysis of variance (Appendix A, Table 79) reveals that there was a significant difference between LOCATIONS OF RESIDENCE FROM 3 TO 10 on the set of three variables: **noun-titles**, **modifiers**, and **verbs** ($F=1.239$, $df=150$, $p<0.033$). Tests of Between-Subjects Effects (Appendix A, Table 80) show that significant differences were found in the relatively few items: #2, #5, #6, #23, #31, #57, and #67.

Post hoc tests for Multiple Comparisons (Appendix A, Table 81) indicates that for **noun-titles** significant differences were observed for **noun-titles** in 3 cases (#5 *преподаватель/–ница*, #23 *лаборант/–ка*, and #57 *корреспондент/–ка*), in 3 **modifiers** (#2 *новый/–ая педагог*, #6 *участковый/–ая врач*, and #67 *энергичный/–ая директор*). Although item #31 (*переводчик/-ца*) obtained a significant level of difference in the Test of Between-Subjects Effects, adequate levels of significance were not achieved in Multiple Comparison Tests.

In all **noun-titles** and **modifiers** of this set participants who resided in rural areas at the age between 3 and 10 years in rural areas used significantly less masculine gender.

Thus, the data obtained in this section of analysis indicates that the factor of residence from 3 to 10 years of age influences the choice of gender in relatively few items. All these cases display a trend similar to the one in the previous study of the factor of residence from 3 to 10 years of age of all items taken together, i.e., participants who resided in rural areas at the age of 3 to 10 differed from those who lived in urban areas using less masculine gender in noun-titles and modifiers.

4.4.6. Multiple comparisons of items depending on the factor of father's education of participants

Multivariate Analysis of variance (Appendix A, Table 82) reveals that there was a significant difference between LEVELS OF FATHER'S EDUCATION on the set of three variables: **noun-titles**, **modifiers**, and **verbs** (F=1.326, df=100, p<0.023). Tests of Between-Subjects Effects (Appendix A, Table 83) show that significant differences were found in a relatively large number of items: #2, #5, #7, #11, #14, #15, #17, #23, #26, #28, #30, #35, #36, #40, #47, #48, #51, #52, #57, #62, #63, # 66, #68, and #71.

Post hoc tests for Multiple Comparisons (Appendix A, Table 84) indicates that for **noun-titles** significant differences were observed for majority of **noun-titles** in (20 cases out 30), and only in 3 **modifiers** (#2 *новый/–ая педагог*, #14 *хороший/–ая референт*, and #62 *безусловный/–ая автор).* Although item #66 (*художник/-ца*) obtained a significant level of difference in the Test of Between-Subjects Effects, the adequate levels of significance were not achieved in Multiple Comparison Tests.

The data from this section of analysis indicates that in the overwhelming majority of the cases the contrast in responses was found between participants whose fathers had high school education and those whose fathers had university education.

In **noun-titles**, only in 6 instances (#23 *лаборант/-ка*, #28 *патнер/-ша*, #52 *акушер/–ка*, #57 *корреспондент/-ка*, #68 *оптимист/–ка*, #71*практикант/-ка*) were significant differences found in responses of participants whose fathers had technical school education as compared to those whose fathers had university education, the latter using significantly more masculine gender. In the majority of cases, responses of participants whose fathers had only high school education contrasted with those whose fathers had a university degree.

In **modifiers**, only one instance (#2 *новый/-ая педагог*) did the responses of participants whose fathers had high school education differ significantly from those whose fathers had technical school education, the latter using significantly more masculine gender. In two other cases the contrast was found between responses of participants whose fathers had a university degree versus those with only high school education, with the latter using less masculine.

Generally, the results of this section of analysis are consistent with the results in the previous study of all items, which indicated that participants whose fathers had higher level of education used more masculine gender in **noun-titles** and **modifiers**.

4.4.7. Multiple comparisons of items depending on the factor of mother's education of participants

Multivariate Analysis of variance (Appendix A, Table 85) revealed that there was a significant difference between LEVELS OF MOTHER'S EDUCATION on the set of three variables: **noun-titles**, **modifiers**, and **verbs** (F=1.565, df=100, p<0.001). Tests of Between-Subjects Effects (Appendix A, Table 86) show that significant differences were found in a relatively large number of items: #2, #5, #7, #11, #14, #15, #17, #23, #26, #28, #30, #35, #36, #40, #45, #47, #52, #57, #62, #68, and #71.

Post hoc tests for Multiple Comparisons (Appendix A, Table 87) indicates that for **noun-titles** significant differences were observed for majority of **noun-titles** in (18 cases out 30), and only in 3 **modifiers** (#2 *новый/–ая педагог*, #14 *хороший/–ая референт*, and #62 *безусловный/–ая автор*). Although items #63 (*воспитатель/-ница*) and #71 (*практикант/-ка*) obtained a significant level of difference in the Test of Between-Subjects Effects, adequate levels of significance were not achieved in Multiple Comparison Tests. It is intersting to note that significant differences are observed basically in the same items (except #51 *претендент/-ка*, #48 *асситент/-ка*, #63 *воспитател/-ница*, #71 *практикант/-ка*) as for the analysis of influence of the father's education.

The data from this section of analysis indicates that in the majority of the cases a contrast in responses was found between participants whose mothers had high school education and those whose mothers had university education (similar to the results of the analysis of father's education). For items #2 (*новый/-ая педагог*), #5 (*преподаватель/-ница*), #14 (*хороший/-ая референт*), #15 (*чемпион/-ка*), #35 (*дебютант/-ка*), and #47 (*оппонент/-ка*) the responses of participants whose mothers had high school education differed significantly from those whose mothers had technical school education, the latter using significantly more masculine gender. For items #28 (*партнер/-ша*), #52 (*акушер/-ка*) the significant differences were found in responses of participants whose mothers had technical school education as compared to those whose mothers had university education, the latter using significantly more masculine gender.

In **modifiers** (incidentally, the same items as in the analysis of father's education), participants with mothers' education at high school level used significantly less masculine than those with the technical school or university education

The results of this section of analysis, despite some differences mentioned above, are quite similar to the results of influence of father's education. They are also consistent with the results in the previous study for all items, which indicated that participants whose mothers had higher level of education used more masculine gender in noun-titles and modifiers.

Multivariate Tests of individual items by the factors of sex, area of parents' residence, and parent's origin (Appendix A. Tables 88-90) indicated that these factors did not cause significant differences in responses. Similarly, the analyses of these factors for all items together did not reveal significant levels of differences.

Multiple comparisons of individual items by social factors indicate that there is a variation in the gender differentiation among individual items. Nevertheless, the results of the analysis of individual items are mostly consistent with the results of analysis of all items grouped together. Some deviations from the general trend in individual items were found only in the comparisons of study areas and age groups, but they may be attributed to the interference of other social factors. It is also interesting to note that in several cases significant differences related to various social factors were found in the same individual items. Thus, in noun-titles differences in participants' responses for #57 (*корреспондент/–ка* 'correspondent') were found to be significant in testing of all seven social factors (in which significant differences between items were revealed); in responses for items #7 (*студент/–ка* 'student'), #26 (*энтузиаст/–ка* 'enthusiast'), #28 (*партнер/–ша* 'cashier', #40 (*перводчик/–ца* 'translator'), #47 (*оппонент/–ка* 'opponent"), and #71 (*практикант/–ка* 'probationer') significant differences were found in testing of 6 social factors; in responses for items

#5 (*преподаватель/–ница* 'instructor'), #15 (*чемпион/–ка* 'champion'), #23 (*лаборант/–ка* 'laboratory assistant'), and #30 (*кассир/–ша* 'cashier') significant differences were found in testing of 5 social factors. In **modifiers**, differences in responses for #2 (*новый/–ая педагог* 'new pedagogue') and #14 (*хороший/–ая референт* 'good reviewer') were found to be significant in testing of 6 social factors, and for #67 (*энергичный/–ая директор* 'energetic director') and #33 (*строгий/–ая комендант* 'austere superintendent') in testing of 4 social factors.

4.5. Cluster analysis

The Proximity Matrix (Appendix A, Table 91) revealed that responses for certain items correlated well with other items. It was decided to set a level of 6 clusters for this type of analysis.

Observation of the Dendrogram of the Hierarchical Cluster Analysis (Plot 50) using average linkage (between groups) indicates that all items fall into two distinct sets. The first one comprises all **modifiers** and **noun-titles**, while the second one comprises all **verbs**.

Within the common cluster of **modifiers** and **noun-titles** two major sub-clusters are observed. All cases of **modifiers** and two **noun-titles** (item #19 *уполномоченный/-ая*, and item #21 *ученый/-ая*) form one category. It is interesting to note that one of these **noun-titles** represents a substantivized participle while the other is a substantivized adjective. Another set includes the remaining 28 **noun-titles**.

Instances of verb-noun coordination stand separately from the other two sub-sets. This is consistent with the general trend, according to which masculine gender in coordination of noun-titles and preterit verbs is used much less than in coordination of modifiers with noun-titles and in cases of noun-titles with two gender forms. These data are also consistent with the result of factor analysis, which treated noun-titles, modifiers, and verbs as having different trends in gender differentiation.

Within the sub-set of **modifiers**, the two **noun-titles** mentioned above (уполномоченный/-ая, ученый/-ая) form a group distinguished from the other items. On the next level of clustering, all **modifiers**, except item #62 (*безусловный/-ая автор*) had similar distances of proximity. Within this group, items #2 (*новый/-ая педагог*), #6 (*участковый/-ая врач*), #31 (*свой/-ая парикмахер*), #33 (*строгий/-ая комендант*) had similar proximities grouping them together, while items #12 (*молодой/-ая мастер*), #14(*хороший/-ая референт*), #50 (*известный/-ая филолог*), #67 (*энергичный/-ая директор*), and #16 (*первый/-ая стажер*) formed another cluster. It is interesting to note that the possessive pronoun *свой/-ая* behaved quite similarly to other modifiers and did not form a separate branch. This contradicts the predictions of some authors (e.g., Protčenko) that pronouns are almost always coordinated by meaning while adjectives and participles are not. Within the first sub-group items #2 (*новый/-ая педагог*) and item #6 (*участковый/-ая врач*) had the highest proximity (and overall highest proximity in the analysis), while within the other sub-group items #12 (*молодой/-ая мастер*) and #14 (*хороший/-ая референт*) as well as #50 (*известный/-ая филолог*) and #67 (*энергичный/-ая директор*) had the highest proximities to each other.

In the set of 28 **noun-titles**, three major groups of items cluster together. Items #17 (*поэт/-есса)* and #44 (*управляющий/-ая*) form the first distinct group. Items #24 (*отличник/-ца*), #36 (*виновник/-ца*), #7 (*студент/-ка*), #11 (*учитель/-ница*), #15 (*чемпион/-ка*), and #10 (*заведующий/-ая*) form the second group. Item #10 (*заведующий/-ая*) within the second group is distant from other members, which may be explained by the fact that unlike other items in this group, it is a substantivized participle. Items #7 (*студент/-ка*) and #11 (*учитель/-ница*) also form a separate cluster. Within the given group these are the only titles which represent educational professional titles, and this may explain the similarity in responses. Within the third group, item #69 (*исполнитель/-ница*) stands separate from all other items, which in their turn fall into two main sub-groups. Items #5 (*преподаватель/-ница*), #47 (*оппонент/-ка*), #23 (*лаборант/-ка*), #26 (*энтузиаст/-ка*), #57 (*корреспондент/-ка*), #30 (*кассир/-ша*), #40 (*перводчик/-ца*), #66 (*художник/-ца*), and #48 (*ассистент/-ка*) cluster into one of these sub-groups, and items #35 (*дебютант/-ка*), #42 (*патриот/-ка*), #51 (*претендет/-ка*), #68 (*оптимист/-ка*), #71 (*практикант/-ка*), #28 (*партнер/-ша*), #52 (*акушер/-ка*), #63 (*воспитатель/-ница*), #38 (*писатель/-ница*), #45 (*активист/-ка*), and #69 (*исполнитель/-ница*) form the other sub-group. Let us note here that all (except *студент/-ка*) noun-titles formed with the help of –*ка* suffix in the feminine fall into these two sub-groups. This result is consistent with findings from factor analysis which also indicated a high degree of correlation of items with the suffix –*ка*. The first sub-group splits into two main clusters. Items #5 (*преподаватель/-ница*), #47 (*оппонент/-ка*), #23 (*лаборант/-ка*), #26 (*энтузиаст/-ка*), #57 (*корреспондент/-ка*), and #30 (*кассир/-ша*) form one cluster (with items #5 and #47 forming a separate branch), item #30 standing apart from other items in this set, and items #23, #26, and #57 (all ending in –*ка* in the feminine). Items #40 (*переводчик/-ца*), #66 (*художник/-ца*), and #48 (*ассистент/-ка*) form the other cluster (with items #40 and #66, both formed with the suffix –ца, having the highest proximity). Within the second sub-group of **noun-titles** two items (#38 *писатель/-ница*, and #45 *активист/-ка*) stand apart from other items. The latter split into two clusters. Items #35 (*дебютант/-ка*), #42 (*патриот/-ка*), #51 (*претендент/-ка*), #68 (*оптимист/-ка*), and #71 (*практикант/-ка*) form one of them. Let us note here that within this cluster all items in the feminine are derived with the suffix –*ка*. The highest proximity is observed for items #35 (*дебютант/-ка*) and #29 (*патриот/-ка*). Within the other cluster, items #28 (*партнер/-ша*) and #52 (*акушер/-ка*) have higher proximities than the item #63 (*воспитатель/-ница*).

Clustering of instances of verb-noun coordination reveals that item #20 (*бригадир находился/-лась*), and similarly item #37 (*фельдшер пришел/-ла*) stand apart from the remaining items. The same phenomenon is observed for the item #3 (*геолог работал/-ла*) and item #70 (*директор приветствовал/-ла*). The remaining items fall into two groups. Within one of them items #55 (*врач был/-а*) and #64 (*ревизор приехал/-а*) have high proximity while the item #9 (*министр прилетел/-а*) is distinct from them. Within the other group a similar picture is observed: items #49 (*председатель открыл/-а*) and #59 (*синоптик заболел/–а*) have a high degree of proximity and form one cluster while item #60 (*редактор просмотрел/-а*) is more distant from them.

The cluster analysis gives a good representation of similarities in responses for the items used in the study. It is generally consistent with findings of the factor analysis, but unlike the latter allows us to obtain more details about similarities among the items.

Chapter 5. CONCLUSION

The present research allows us to observe that language and culture are interconnected. As applied to the category of gender differentiation in personal and professional titles of women, the comparison of English and Russian reveals that this phenomenon is realized in the two languages differently. Although the notion of gender is definitely perceived by English language speakers, the process of formation of parallel feminine and masculine titles did not go very far in this language. Meanwhile, the Russian language developed a complicated system for reflection of gender in referential terms.

The present research also confirms that linguistic variation is an important factor in a language, particularly in Russian. With respect to gender differentiation of referential terms for women, we are able to see that speakers have various possibilities to express their ideas. At the same time variation in speech is not random. Our analysis proved that preference for certain gender forms is associated with particular social characteristics of people and contexts of use.

Changes in society may influence certain language categories. In particular, the involvement of women in social, production, political and cultural activities in the late 19th and early 20th century in Russia required the development of certain referential terms for them. Thus, the formation of feminine personal and professional titles began to expand. At the same time, the contrary trend of using masculine titles in reference to women evolved, particularly in the speech of the progressive intelligentsia. Thus, we may observe that social changes not only promote changes in language, but they may bring into life varying, and sometimes competing, trends.

Changes in gender differentiation in Russian influenced not only morphological categories. The expression of gender involved syntactic constructions of noun-titles and modifiers and preterit verbs. Combinations of noun-titles which did not develop corresponding feminine forms or parallel forms in the same stylistic register, began to be used in conjunction with feminine modifiers and preterit verbs. The peculiarity of this situation was that in order to reflect the appropriate gender by meaning, the norms of grammatical agreement had to broken. It is interesting to note that the development of this phenomenon was different in these two cases. The coordination of preterit verbs and masculine noun-titles by meaning has spread quite rapidly, and now accounts for 85-95% of cases (e.g., *педагог сказала* rather than *педагог сказал*). However, the same type of coordination in modifiers is progressing much slower. The proportion of feminine modifiers used with masculine noun-titles is approximately 30% of all cases, but only in the neutral and colloquial styles. The existing Academic Grammar still considers agreement by meaning in constructions of this type unacceptable in formal context.

In addition, we were able to see that changes in a language represent a process of gradual transition. We could witness that changes, in our particular case changes in the gender differentiation of women's referential terms, diffuse through the vocabulary gradually. The change obviously started in certain words, and then involved other ones. This is reflected in differences of means for the responses of the experiment participants for the individual items used in the study, and also in the fact that differences in gender differentiation, when tested in relation to various social factors, were significant for some entries and not significant for others.

Our study revealed that gender differentiation in personal and professional noun-titles, modifiers and preterit verbs, when used with masculine noun-titles, represents an extremely complex phenomenon. Various factors influence the choice of gender, such as context, stylistic register, discourse situation, lexical properties of words, frequency of use, and even, perhaps, predisposition of speakers. The present research, however, was concentrated mostly on the influence of sociolinguistic characteristics of speakers, the structural properties of sentences in which titles were used, and some peculiarities of morphological composition of these titles.

We analyzed two approaches to the problem. While both of them single out important aspects of gender differentiation in referential terms, they disagree as to what tendency prevails: the use of feminine gender wherever such forms exist (Protčenko), or transition to the gender-unmarked use of masculine titles (Panov-Krysin). It is important, in this connection, to indicate that these issues must be reviewed with respect to specific circumstances. The factor of stylistic register is of primary importance here. Native Russian speakers are well aware of the fact that in the formal style preference will be given to the use of masculine gender, while in casual conversations they may use more feminine titles. Thus, the issue of variation in gender arises most vividly only in certain contexts, i.e., when professional and personal titles are used in sentences in neutral and moderately colloquial style. The two above mentioned approaches are based on opposite points of view. Protčenko claims that in this "shady" area feminine titles will prevail, while Panov and Krysin insist that the new tendency of using masculine gender is triumphing over the old one. The latter authors also indicated and investigated the importance of sociological factors. However, we suggest that they exaggerate the proportions of this new trend. According to their data, most of the noun-tiles will be used in the masculine gender, and in modifiers and verbs the percentage of masculine may reach the levels of 40-60 percent. At the same time, the data from other sources, particularly from our Pilot Study and Main Experiment, indicate that the levels of use of masculine gender in this stylistic register is much lower (45% for nouns, 31% for modifiers, and 15% for preterit verbs). Thus, it seems reasonable to state that the truth about gender differentiation lies somewhere in between: feminine gender is still widely used for noun-titles, and even more for verbs, but on the other hand there is a considerable shift, which depends on social parameters of speakers, towards the use of masculine in noun-titles in the stylistical register in question.

The results of our study show that social factors, as well as some morphological properties of items and structural peculiarities of sentences in which items are used, indeed, significantly influence the choice of gender. Our preliminary study (Pilot Study), which was based on responses obtained from Russian immigrants to Canada and tested the use of noun-titles, modifiers and preterit verbs employed with masculine nouns, revealed that such social factors as participants' age, their education, and location of residence in the former Soviet Union, provide significant differences in responses among a relatively small number of people, nineteen in our case. Thus, investigation of the influence of the age factor revealed that participants older than 30 years used significantly more feminine gender in noun-titles as compared to younger participants. In addition, the participants who resided outside Russia proper (they were mostly from the western republics, such as Ukraine and Belarus) used significantly more masculine gender than those participants who lived in Russia itself. On the other hand, for modifiers combined with masculine nouns the factor of participants' education proved to be significant. The participants with post-secondary education tended to use significantly more masculine modifiers than those with only high school education. Statistical analysis did not reveal significant differences in responses for the sentences which tested gender differentiation in preterit verbs coordinated with masculine noun-titles. Among other intersting findings of the Pilot Study was the fact that substantivized participles used with attributes were not predominantly employed in the masculine form, as predicted by Protčenko (similar data were obtained also later in the Main Experiment). Also, the data from this preliminary study did not indicate that the gender differentiation in pronouns combined with masculine noun-titles would be substantially different from that of adjectives and participles (the data of the Main Experiment later gave similar results). In general, the Pilot study showed that a further investigation of the problem might reveal more interesting result, especially when individual items were reviewed.

The purpose of the Main Experiement was to verify the results obtained in the Pilot Study, and also to broaden the scope of research. It was planned to conduct the research in various locations. We chose to repeat the study in Canada, and investigate more closely how extensive exposure of Russian immigrants to the English language influences their choice of gender in titles. The experiment was also conducted in two locations in Russia. Moscow was chosen because it is a center of language norm, on one hand, and on the other hand, the population here experiences a significant influence from the west. In contrast to that, in Krasnoyarsk there is no significant influence from western languages. At the same time, we decided to compare the situation in two former Soviet republics. In Belarus, the Russian language continues to be widely used. The population, however, is experiencing a significant influence from the Polish language, in which, according to some authors, there is an increase of the masculine gender in referential terms for women. Thus, higher proportions of the masculine in referential terms were expected in the Russian used in Belarus. On the other hand, the official use of Russian in Moldova has become restricted since early 1990s. At the same time, the grammatical structure of Modavian quite clearly distinguishes the gender of nouns, and therefore does so in referential terms. In addition, word formation patterns in Moldavian allow the formation of feminine derivatives from masculine noun-titles quite easily and without stylistic coloring. This resulted in the fact that the overwhelming majority of referential terms acquired parallel gender forms. Thus, in this case we may expect that the speech of Russian speakers in Moldova will contain higher proportions of feminine referential terms.

The extended data collected in the course of the experiment indicated that the trends revealed in the preliminary study were confirmed. In addition, other interesting data were obtained.

The frequency analysis of the Main Experiment indicated that the means for the use of masculine and feminine forms were consistent with the results of the Pilot Study. The analysis of differences in the use of gender in the new arrangement was conducted not for three categories as in the Pilot Study (noun-titles, modifiers, and preterit verbs), but for four categories (**noun-titles**, **modifiers**, preterit **verbs**, and **items pooled**). The category of 'items pooled' was added to investigate the "general" situation in the differentiation of gender, given that the proportions of items used in the experiment (30 noun-titles, 10 modifies, and 10 verbs) may roughly reflect the occurrence of these categories in speech. Statistical analysis revealed that significantly more feminine **noun-titles**, preterit **verbs**, and **items pooled** combined, and more masculine **modifiers** were preferred by participants in the present study.

The analysis of responses of the experiment participants from five study areas revealed that there exist pronounced differences. In **noun-titles** the highest means were obtained by participants in Edmonton, slightly lower means – by participants from Minsk, almost equal means by participants from Moscow and Krasnoyarsk, and the lowest by participants from Chisinau. Differences between Canada and Moldova were found to be statistically significant. In **modifiers**, mean values showed that participants from Minsk and Chisinau (and from Moscow slightly lower) had relatively similar preferences in the choice of gender, while participants from Edmonton used more masculine, and participants from Krasnoyarsk more feminine forms. Responses from Krasnoyarsk indeed indicated that significantly less masculine was used there as compared to responses from Edmonton, Minsk and Chisinau. The differences between Moscow and Edmonton were also found significant. In **verbs**, however, the trend was somewhat different. Participants from Moscow and Krasnoyarsk had higher means for masculine, while three other areas obtained lower means. Statistically significant differences were found between Minsk and Moscow. Finally, in **items pooled**, the highest means were observed in Edmonton, relatively similar lower means in Minsk and Moscow, and almost equal low means in Chisinau and Siberia. The differences between Canada, Moldova and Siberia proved to be significant. It is worthwhile mentioning that the analysis of social factors was later conducted as related to five study areas, and the differences were quite consistent with the above results.

In the next stage, gender differentiation was tested within the five study areas. Statistically significant differences in responses for four tested categories were consistent with the analysis of all study areas within three of them: Moscow, Chisinau and Krasnoyarsk. Minsk differed from the above in that significantly more feminine gender was not used in **noun-titles**. In Edmonton no statistically significant differences were found both for **noun-titles** and **items pooled**.

Analysis of the influence of the sex factor indicated that within study areas some differences in means existed for all tested categories. However, these differences in mean values did not reach statistically significant levels.

The influence of the age factor was tested in two ways: age was viewed as a continuum first, and then four age groups (17-25, 26-35, 36-45, 46+) were compared. In the first section, for all areas analyzed together, it was established that in **noun-titles** and **items pooled** the older participants were the more they used feminine gender; no statistically significant differences as related to age as a continuum were found for **modifiers** and **verbs**. However, the mean values indicated that less masculine in **modifiers**, and more feminine in **verbs** was used by younger participants as compared to older. The comparison of five study areas showed that the factor of age was primarily important for **noun-titles** (statistically significant in all areas except Moldova). The trend to use more grammatical agreement in verb-noun coordination in the younger generation was observed in Edmonton, while the trend for agreement by meaning prevailed in the older geneation in **modifiers** for the Krasnoyarsk study area. The analysis of the influence of the age factor taken in intervals revealed statistically significant differences in **noun-titles** and **items pooled**. The differences were found between all age groups, with the older people using less masculine, except the first two young generations (17-25 and 26-35). These results allow us to claim more decisively, as compared to the conclusions of Panov and Krysin, that the influence of the age factor is very important. Generally, the younger the participants were the more masculine noun-titles they used.

The analysis of the influence of the duration of residence in Canada revealed that in **noun-titles, modifiers** and **items pooled** participants with longer residence in Canada used less masculine gender. This did not give the expected outcome, i.e., longer residence increasing the use of masculine gender, which is most likely due to the interference of the influence of other social facors, primarily age.

The factor of participants' education significantly influenced the choice of gender in their responses. In three categories, i.e., **noun-titles, modifiers** and **items pooled**, a higher level of education was associated with the increased use of the masculine gender. However, the data for **noun-titles** and **items pooled** indicated that no statistically significant differences were found in responces of participants with technical school education and university education.

The analysis of the influence of social status of the participants revealed that this factor also determines the choice of gender. In **noun-titles**, intelligentsia and white-collar workers used significantly more masculine gender than blue-collar workers, while in **modifiers** and **items pooled** significant differences were found between all three groups, and the higher the social status was, the more masculine was used by participants.

For the analysis of participants' residence at the age of 3 to 10 years, we employed two arrangements. In the first section we compared those who resided as children in the same area with participants who lived as children in a different area. Unfortunately, although it was established that participants with residence outside their primary area contrasted with those who lived in the same area, it appeared to be difficult to establish trends. Thus, in the second section we compared participants' residence at the age of 3 to 10 years in urban and rural communities. It was found that in the categories of **noun-titles** and **items pooled** participants who resided as children in rural areas used significantly less masculine gender. No statistically significant differences were observed in the responses of participants from urban areas. However, the mean values of the use of masculine in all four tested categories generally decreased with the decrease of the size of township, i.e., less masculine in towns and more in big cities and capitals.

In the present study we also analyzed the influence of the factor of parents' area of residence, with three categories defined: those both parents of whose lived in the same area, those both parents of whose lived outside their area of permanent residence, and those with one parent from the same area and one parent from the area outside. We were not able to obtain statistically significant differences in the responses of the participants. We should admit that we experienced difficulties in our attempt to categorize the possible trends of influence because of the considerable variation of areas from which the participants' parents came. At the same time, in certain instances the mean values of responses from participants whose parents were from "outside" areas differed from those for participants whose parents were from the same area or had a "mixed" origin.

We also attempted to prove that the parents' origin influences the choice of gender in participants. However, despite the fact that the mean values allowed us to observe that particiapnts who had at least one parent from the urban communities gave preference to the masculine gender in **noun-titles** and **modifiers**, but used less masculine in **verbs**, statistically significant levels of such differnces were not achieved.

The factor of parents' education was analyzed separately for each parent. Observation of mean values for both factors revealed considerable similarities in the distribution of means. Both factors were found to be statistically significant.

In the analysis of the father's education, participants with father's education at the university level used significantly more masculine than those with father's education at high school level and technical school level in **noun-titles**. In **modifiers** and **items pooled**, a contrast was found between participants whose father's education was at high school level and those with father's education at the university level, the latter using more masculine.

The analysis of mother's education revealed more statistically significant differences in comparison to father's education. Thus, in the same three categories, i.e., **noun-titles**, **modifiers**, and **items pooled**, all subdivisions of the education levels contrasted with each other. The higher the level of mother's education, the more masculine gender was found in the responses of participants. The fact that more consistent distribution of means between categories and in each study area was observed, as well as the fact that more statistically significant differences for this factor were obtained, allows as to claim that mother's education influences the preference of gender in participants more than the factor of father's education.

The second part of the study was devoted to the analysis of the corpus parameters, as we assumed that not only social factors influence gender differentiation in referential terms. We investigated some aspects of structure and composition of the sentences in which these terms were used, and some morphological properties of individual words.

We also concentrated our attention on the behaviour of individual words in relation to various social factors.

Factor analysis revealed that the most pronounced trend in responses of participants existed in gender differentiation of **modifiers**, which were singled out by the Factor 1 (see p. 135). Factors 2 and 3 revealed that similarities in participants' responses pertained to certain **noun-titles** from our study. We discovered that the majority of these items had a similar morphological composition, i.e., their feminine derivatives were formed with the suffix *–к-*, which brings us to the conclusion that the factor of morphological formation of referential terms has an important influence on gender differentiation.

We also investigated differences due both to the proximity and the position of the reference to gender. Thus, we found that when the gender reference preceded **modifiers** and **verbs**, significantly more masculine forms were used. It seems that when participants clearly understood to which gender the titles were attributed, they deemed it redundant to emphasize the gender again, and felt more reluctant to violate grammatical coordination of modifiers and verbs with the noun expressed in the masculine. At the same time for the category of **items pooled** (the majority of which were **noun-titles**) when the gender reference preceded an item, significantly more feminine gender was used by participants. This may be attributed to the fact that participants in this case most likely felt that their choice of gender-marked forms was not limited by grammatical constraints.

The analysis of the influence of the proximity of the gender reference revealed that when the gender reference was separated by other words and followed the tested **noun-title**, significantly more masculine gender was used than when the reference was preceding. This indicates that in the course of information processing when participants first encountered the gender indication they preferred to use the feminine gender, and vice versa, if the gender of the person from the sentence was not clearly defined, participants preferred to use the gender-unmarked form. The same was observed for the category of **items pooled** in both cases when the gender reference adjoined the item, or was separated by other words. In **verbs**, the situation was reversed: when the gender reference preceded the item, whether adjoining the item, or separated from it by other words, participants used significantly more masculine gender. In addition, our analysis also indicated that the closer the gender reference was to the tested item (for the categories of **noun-titles** and **items pooled**, both preceding or following), the more feminine gender was used, while in **verbs** the trend was reversed. These results are consistent with the data observed in the previous paragraph.

The presence of a preterit verb in sentences with **noun-titles** was also found to be an important factor. Thus, if a feminine past tense verb was present in a sentence this enhanced the use of the feminine gender in noun-titles. However, the presence of preterit verbs in the sentences did not influence significantly the use of gender in **modifiers**.

Our investigation of possible differences in true nouns versus substantivized adjectives and participles did not reveal significant differences in the use of gender.

The use of declinable specifiers with **noun-titles** having two corresponding forms influenced gender differentiation in them. Significantly more feminine gender forms of noun-titles were used by participants in the sentences containing such declinable specifiers.

Among other structural features reviewed in this section of the analysis were double references to gender as compared to single references. The results show that the more the gender of the person is emphasized, the more probable is it that the feminine forms will be used.

We also conducted an investigation of the behavior of individual items used in the questionnaire in relation to the influence of the various social factors which were used in the present study. Multiple comparisons of items indicated that there was a considerable variation of gender differentiation among them. Nevertheless, significant differences in individual items were consistent with the results of analysis when all items were grouped together. In addition, the significant differences in individual items were found in the same set of social factors (area, age, education, social status, residence from 3 to 10 years, and parents' education). Certain deviations from the general trend were found in individual items only in the comparisons of study areas and age groups. It is interesting also that significant differences were observed in many cases for the same items.

We should also note here that the analysis of the age factor in individual items gave statistically significant difference only in two **modifiers** (in the analysis of all items grouped together in the first part of our analysis no significant differences in this category were found at all). Our data indicate that it is the factors of education and social status that definitely influence the choice of gender in modifiers. This allows us to state that the tendency of using more feminine gender in this category with time is not overtly expressed. Although some progress towards the increased use of feminine may be expected in some cases, it is too premature to claim that there are rapid developments. It seems that the proportion of 30% for the feminine has been preserved in the last several decades.

The results of multivariate tests for all items grouped together, and multiple comparisons of the individual items revealed that statistically significant differences in the use of preterit verbs were found only in contrasting of study areas (Minsk and Moscow), for the age factor in the Edmonton area, and in a very few instances when individual items were tested by social factors. This, probably, indicates that the category of verbs is less dependent on social factors than other categories. We may even argue that the trend towards agreement by meaning in this category has reached its culmination.

In the last stage of our research we conducted a cluster analysis, which allowed us to establish proximities between individual items, and group them into classes. The results of the cluster analysis revealed that the responses of participants place the individual items from the study into three major groups, which represent (with the exception of only two substantivized adjectives) the categories investigated in the present study, i.e., **noun-titles**, **modifiers** and **verbs**. This type of analysis confirmed, similarly to factor analysis, that there exist three different trends in gender differentiation, and that there is no overall trend.

It is interesting to note also that in the categories of **noun-titles** and **modifiers** changes in gender differentiation go along the lines of the diffusionist model, while in **verbs** the situation seem to be different.

In general, virtually all hypotheses set forth in the beginning of our main study were confirmed, in some cases partially, by the results of the analysis.

The research indicated that such factors as stylistic register, age, education, social status and parents' education, play the most important role in gender differentiation of referential terms.

Future research may be concentrated on such issues as the dependence of gender differention in referential terms on frequencies of their use. Interesting results may also be obtained from the investigation of the semantic properties of noun-titles, which appear to be the only explanation for the variation in mean values

In addition, it will be instructive to conduct research not only in urban areas as in the present study, but also in rural ones. It is natural to predict that the changes in the system of gender differentiation in referential terms are spreading at a different pace in rural and urban areas, most likely more slowly in the former. Our data showed that the factor of parents' origin from rural areas to some extent influenced the choice of gender in participants. Thus, a comparative study of rural and urban dwellers may produce interesting results. The addition of information from rural inhabitants will allow a better representation of social groups for the study as well.

Finally, it may be more instructive to investigate gender differention in responses of non-written material. A new experiment may be set up in order to test responses in the context of oral speech. Various types of assignments may be considered, i.e., describing a picture, talking about professions of friends or relatives, etc., as well as observations from TV broadcasts and movies.

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APPENDIX A.

TABLES AND PLOTS

TABLE 1. FEMININE NOUNS VS. MASCULINE

	Average fem.		Average fem.
Активист/ка 'activist'	.63	*Парикмахер/–ша* 'hairdresser'	.63
Акушер/–ка 'obstetrician'	.58	*Партнер/–ша* 'partner'	.78
Асситент/–ка 'assistant'	.21	*Патриот/–ка* 'patriot'	.42
Воспитатель/–ница 'nursery-school teacher	.89	*Переводчик/–ца* 'translator'	.42
Врач 'physician' (colloquial)	.10	*Писатель/–ница* 'writer'	.74
Гравер/–овщица 'engraver'	.10	*Практикант/–ка* 'trainee'	.79
Дворник/–чиха 'yard-keeper'	.37	*Преподаватель/–ница* 'instructor'	.10
Дебютант/–ка 'debutant'	.53	*Претендент/–ка* 'contender'	.68
Диктор/–ша 'announcer'	.21	*Поэт/–есса* 'poet'	.47
Директо/–исса 'director'	.68	*Санитар/–ка* 'nurse's assistant'	.79
Заведующий/–ая 'manager'	.94	*Студент/–ка* 'student'	.84
Воспитатель/–ница 'performer'	.63	*Табельщик/–ца* 'time-keeper'	.89
Кассир/–шar 'cashier'	.68	*Почтальон/–ша* 'mailman'	.42
Кладовщик/–ца 'storekeeper'	.89	*Уполномоченный/–ая* 'representative'	.31
Комендант/–ша 'superintendent'	.16	*Ученый/–ая* 'scientist'	.31
Корреспондент/–ка 'reporter'	.10	*Учитель/–ница* 'teacher'	
Крановщик/–ца 'crane operator'	.74	colloquial	.84
Лаборант/–кat 'laboratory assistant	.52	neutral	.47
Лифтер/–шar 'lift operator'	.68	*Фельдшер/–ица* 'medical attendant'	.21
Красильщик/–ца 'dyer'	.94	*Ферзеровщик/–ца* 'milling-machine operator'	.74
Математик/–ичка 'mathematician'	.89	*Художник/–ца* 'painter, designer'	.68
Музыкант/–ша 'musician'	.21	*Чемпион/–ка* 'champion'	.84
Наборщик/–ца 'type-setter'	.68	*Энтузиаст/–ка* 'enthusiast'	.42
Оппонент/–ка 'opponent'	.05	*Юбиляр/–ша* 'person having an anniversary'	.26
Отличник/–ца 'distinguished student or worker'	.68		

Total titles: 912

Total fem/masc: 502/410

Percent of fem: 55

TABLE 2. SIGNIFICANCE OF FACTORS FOR NOUN-TITLES

FACTOR	VARIABLES	Subjects	Total titles	Total feminine	Average
Gender	Females	7	336	187	.56
	Males	12	576	315	.54
	Significance		x^2=0.23, p<.852		
Age	30 and older	11	528	318	.60
	Under 30	8	384	184	.47
	Significance		x^2=4.00, p<.0426*		
Education	High school	5	240	141	.59
	Post secondary	14	672	361	.53
	Significance		x^2=.615, p<.480		
Residence in USSR	Republics (western)	7	336	156	.46
	Russia	12	576	346	.26
	Significance		x^2=4.745, p<.028*		
Parental social status	Blue-collar	5	240	138	.58
	Intelligentsia and white-collar	14	672	364	.54
	Significance		x^2=.228, p<.639		

TABLE 3. COORDINATION OF MODIFIERS

ITEMS	AVERAGE
Первый/–ая автор 'first author'	.16
Главный/–ая 'head physician'	.31
Этот/–а 'this geologist'	.31
Сам/–а женорг 'organizer of activities for women herself'	.89
Страший/–ая мастер 'chief foreman'	.16
Новый/–ая педагог 'new pedagogue'	.16

Total titles: 114

Total fem: 37

Percent of fem: 32

TABLE 4. SIGNIFICANCE OF FACTORS FOR MODIFIERS

FACTOR	VARIABLES	Subjects	Total titles	Total feminine	Average
Gender	Females	7	42	19	.45
	Males	12	72	18	.25
	Significance		x^2=2.422, p<.114		
Age	30 and older	11	43	66	.30
	Under 30	8	38	48	.31
	Significance		x^2=.028, p<.8423		
Education	High school	5	30	16	.53
	Post secondary	14	84	21	.25
	Significance		x^2=3.779, p<.049*		
Residence in USSR	Republics (western)	7	42	18	.43
	Russia	12	72	19	.26
	Significance		x^2=1.626, p<.199		
Parental social status	Blue-collar	5	30	15	.50
	Intelligentsia	14	84	22	.26
	Significance		x^2=2.702, p<.096		

TABLE 5. COORDINATION OF PRETERIT VERBS

ITEMS	AVERAGE
Геолог работал/–а 'geologist worked'	.79
Женорг приходил/–а 'organizer of activities for women came'	.89
Педагог сказал/–а 'pedagogue said'	.84
Уполномоченный приехал/–а 'representative arrived'	.74
Ученый разработал/–а 'scientist developed'	.95

Total titles: 95

Total fem: 81

Percent of fem: 85

TABLE 6. SIGNIFICANCE OF FACTORS FOR PRETIRIT VERBS

FACTOR	VARIABLES	Subjects	Total titles	Total feminine	Average
Gender	Females	7	35	32	.91
	Males	12	60	49	.82
	Significance		x^2=.131, p<.716		
Age	30 and older	11	55	43	.78
	Under 30	8	40	38	.95
	Significance		x^2=.410, p< .530		
Education	High school	5	25	24	.96
	Post secondary	14	70	57	.81
	Significance		x^2=2.684, p<.097		
Residence in USSR	Republics (west)	7	35	31	.89
	Russia	12	60	50	.83
	Significance		x^2=.038, p<.825		
Parental social status	Blue-collar	5	25	24	.96
	Intelligentsia	14	70	57	.81
	Significance		x^2=.239, p<.631		

TABLE 7. DATA FREQUENCY

AREA

Valid	Belarus	104	21.6	21.6	21.6
	Russia	88	18.3	18.3	39.9
	Moldova	90	18.7	18.7	58.6
	Canada	117	24.3	24.3	83.0
	Siberia	82	17.0	17.0	100.0
	Total	481	100.0	100.0	

SEX

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	males	170	35.3	35.3	35.3
	females	311	64.7	64.7	100.0
	Total	481	100.0	100.0	

AGE

Valid	17.00	8	1.7	1.7	1.7
	18.00	7	1.5	1.5	3.1
	19.00	11	2.3	2.3	5.4
	20.00	28	5.8	5.8	11.2
	21.00	16	3.3	3.3	14.6
	22.00	11	2.3	2.3	16.8
	23.00	22	4.6	4.6	21.4
	24.00	12	2.5	2.5	23.9
	25.00	18	3.7	3.7	27.7
	26.00	10	2.1	2.1	29.7
	27.00	17	3.5	3.5	33.3
	28.00	13	2.7	2.7	36.0
	29.00	4	.8	.8	36.8
	30.00	10	2.1	2.1	38.9
	31.00	14	2.9	2.9	41.8
	32.00	6	1.2	1.2	43.0
	33.00	6	1.2	1.2	44.3
	34.00	15	3.1	3.1	47.4
	35.00	6	1.2	1.2	48.6
	36.00	10	2.1	2.1	50.7

	37.00	16	3.3	3.3	54.1
	38.00	14	2.9	2.9	57.0
	39.00	14	2.9	2.9	59.9
	40.00	8	1.7	1.7	61.5
	41.00	12	2.5	2.5	64.0
	42.00	13	2.7	2.7	66.7
	43.00	12	2.5	2.5	69.2
	44.00	4	.8	.8	70.1
	45.00	13	2.7	2.7	72.8
	46.00	14	2.9	2.9	75.7
	47.00	9	1.9	1.9	77.5
	48.00	11	2.3	2.3	79.8
	49.00	11	2.3	2.3	82.1
	50.00	11	2.3	2.3	84.4
	51.00	8	1.7	1.7	86.1
	52.00	5	1.0	1.0	87.1
	53.00	4	.8	.8	87.9
	54.00	3	.6	.6	88.6
	55.00	3	.6	.6	89.2
	56.00	3	.6	.6	89.8
	57.00	2	.4	.4	90.2
	58.00	3	.6	.6	90.9
	59.00	2	.4	.4	91.3
	60.00	4	.8	.8	92.1
	61.00	6	1.2	1.2	93.3
	63.00	2	.4	.4	93.8
	64.00	2	.4	.4	94.2
	65.00	1	.2	.2	94.4
	66.00	1	.2	.2	94.6
	67.00	3	.6	.6	95.2
	69.00	4	.8	.8	96.0
	70.00	3	.6	.6	96.7
	72.00	2	.4	.4	97.1
	73.00	2	.4	.4	97.5
	74.00	2	.4	.4	97.9
	75.00	2	.4	.4	98.3
	76.00	2	.4	.4	98.8
	79.00	4	.8	.8	99.6
	80.00	1	.2	.2	99.8
	84.00	1	.2	.2	100.0
	Total	481	100.0	100.0	

CANADIAN RESIDENCE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	17	3.5	14.5	14.5
	2.00	17	3.5	14.5	29.1
	3.00	19	4.0	16.2	45.3
	4.00	20	4.2	17.1	62.4
	5.00	7	1.5	6.0	68.4
	6.00	9	1.9	7.7	76.1
	7.00	6	1.2	5.1	81.2
	8.00	5	1.0	4.3	85.5
	9.00	4	.8	3.4	88.9
	10.00	6	1.2	5.1	94.0
	18.00	3	.6	2.6	96.6
	19.00	3	.6	2.6	99.1
	24.00	1	.2	.9	100.0
	Total	117	24.3	100.0	
Missing	.00	364	75.7		
Total		481	100.0		

EDUCATION

Valid	non-completed high school	13	2.7	2.7	2.7
	high school	109	22.7	22.7	25.4
	technical school	85	17.7	17.7	43.0

	non-completed university	34	7.1	7.1	50.1
	university	240	49.9	49.9	100.0
	Total	481	100.0	100.0	

RESIDENCE FROM 3 TO 10

Valid	outside area	74	15.4	15.5	15.5
	capital	214	44.5	44.9	60.4
	big cities	68	14.1	14.3	74.6
	towns	67	13.9	14.0	88.7
	villages	54	11.2	11.3	100.0
	Total	477	99.2	100.0	
Missing	.00	4	.8		
Total		481	100.0		

PARENTS' AREA OF RESIDENCE

Valid	outside area both	101	21.0	21.2	21.2
	inside area both	293	60.9	61.4	82.6
	mixed outside/ inside area	83	17.3	17.4	100.0
	Total	477	99.2	100.0	
Missing	.00	4	.8		
Total		481	100.0		

PARENTS' ORIGIN

Valid	both rural	160	33.3	34.5	34.5
	both urban	228	47.4	49.1	83.6
	mixed rural/urban	76	15.8	16.4	100.0
	Total	464	96.5	100.0	
Missing	.00	17	3.5		
Total		481	100.0		

FATHER'S EDUCATION

Valid	high school	189	39.3	40.0	40.0
	technical school	65	13.5	13.7	53.7
	universityd	219	45.5	46.3	100.0
	Total	473	98.3	100.0	
Missing	.00	8	1.7		
Total		481	100.0		

MOTHER'S EDUCATION

Valid	high school	186	38.7	38.8	38.8
	technical school	87	18.1	18.1	56.9
	universityd	207	43.0	43.1	100.0
	Total	480	99.8	100.0	
Missing	.00	1	.2		
Total		481	100.0		

TABLE 8. MASCULINE VS. FEMININE

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NOUN-TITLES MASC	13.9081	481	6.1729	.2820
	NOUN-TITLES FEM	16.0919	481	6.1729	.2820
Pair 2	MODIFIERS MASC	7.7417	481	2.5407	.1160
	MODIFIERS FEM	2.2583	481	2.5407	.1160
Pair 3	VERBS MASC	1.4220	481	1.7709	.0807
	VERBS FEM	8.5780	481	1.7709	.0807
Pair 4	ITEMS POOLED MASC	23.046	481	7.750	.3549
	ITEMS POOLED FEM	26.954	481	7.750	.3549

TABLE 9. STUDY AREAS

Descriptive Statistics

	AREA	Mean	Std. Deviation
NOUN-TITLES	Belarus	14.2586	5.7538
	Russia	13.1957	5.5384
	Moldova	12.7038	6.3632
	Canada	15.7092	6.9725
	Siberia	13.5513	5.5935
	Total	13.9088	6.1776

MODIFIERS	Belarus	7.9714	2.0199
	Russia	7.5000	2.8237
	Moldova	7.7079	2.9214
	Canada	8.5128	2.1529
	Siberia	6.6000	2.3289
	Total	7.7385	2.5483
VERBS	Belarus	1.0900	1.6492
	Russia	1.8171	1.8149
	Moldova	1.4063	1.8867
	Canada	1.1853	1.7445
	Siberia	1.6639	1.5607
	Total	1.4065	1.7574
ITEMS POOLED	Belarus	23.1900	6.4828
	Russia	22.5176	7.5572
	Moldova	21.8263	8.8413
	Canada	25.0935	8.3139
	Siberia	21.8216	6.8632
	Total	23.0471	7.7565

TABLE 10. STUDY AREAS
Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
AREA	Pillai's Trace	.108	4.428	12.000	1419.000	.000
	Wilks' Lambda	.894	4.504	12.000	1246.440	.000
	Hotelling's Trace	.117	4.562	12.000	1409.000	.000
	Roy's Largest Root	.093	11.029	4.000	473.000	.000

a Exact statistic
b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+AREA

TABLE 11. STUDY AREAS
Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
AREA	NOUN-TITLES	446.363	4	111.591	2.971	.019
	MODIFIERS	184.563	4	46.141	7.511	.000
	VERBS	35.755	4	8.939	2.966	.019
	ITEMS POOLED	773.568	4	193.392	3.274	.012

TABLE 12. MINSK STUDY AREA
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NOUN-TITLES MASC	14.1250	104	5.7584	.5647
	NOUN-TITLES FEM	15.8750	104	5.7584	.5647
Pair 2	MODIFIERS MASC	7.9712	104	2.1965	.2154
	MODIFIERS FEM	2.0288	104	2.1965	.2154
Pair 3	VERBS MASC	1.0962	104	1.6459	.1614
	VERBS FEM	8.9038	104	1.6459	.1614
Pair 4	ITEMS POOLED MASC	23.1923	104	6.4868	.6361
	ITEMS POOLED FEM	26.8077	104	6.4868	.6361

TABLE 13. MOSCOW STUDY AREA
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NOUN-TITLES MASC	13.1932	88	5.5354	.5901
	NOUN-TITLES FEM	16.8068	88	5.5354	.5901
Pair 2	MODIFIERS MASC	7.5000	88	2.8203	.3006
	MODIFIERS FEM	2.5000	88	2.8203	.3006
Pair 3	VERBS MASC	1.8182	88	1.8166	.1936
	VERBS FEM	8.1818	88	1.8166	.1936
Pair 4	ITEMS POOLED MASC	22.5114	88	7.5597	.8059
	ITEMS POOLED FEM	27.4886	88	7.5597	.8059

TABLE 14. CHISINAU STUDY AREA

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NOUN-TITLES MASC	12.7079	89	6.3643	.6746
	NOUN-TITLES FEM	17.2921	89	6.3643	.6746
Pair 2	MODIFIERS MASC	7.7079	89	2.9240	.3099
	MODIFIERS FEM	2.2921	89	2.9240	.3099
Pair 3	VERBS MASC	1.4045	89	1.8873	.2001
	VERBS FEM	8.5955	89	1.8873	.2001
Pair 4	ITEMS POOLED MASC	21.8202	89	8.8492	.9380
	ITEMS POOLED FEM	28.1798	89	8.8492	.9380

TABLE 15. EDMONTON STUDY AREA

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NOUN-TITLES MASC	15.3932	117	6.9753	.6449
	NOUN-TITLES FEM	14.6068	117	6.9753	.6449
Pair 2	MODIFIERS MASC	8.5128	117	2.1520	.1990
	MODIFIERS FEM	1.4872	117	2.1520	.1990
Pair 3	VERBS MASC	1.1880	117	1.7416	.1610
	VERBS FEM	8.8120	117	1.7416	.1610
Pair 4	ITEMS POOLED MASC	25.0940	117	8.3170	.7689
	ITEMS POOLED FEM	24.9060	117	8.3170	.7689

TABLE 16. KRASNOYARSK STUDY AREA

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NOUN-TITLES MASC	13.5802	81	5.5675	.6186
	NOUN-TITLES FEM	16.4198	81	5.5675	.6186
Pair 2	MODIFIERS MASC	6.6463	82	2.3167	.2558
	MODIFIERS FEM	3.3537	82	2.3167	.2558
Pair 3	VERBS MASC	1.7590	83	1.6863	.1851
	VERBS FEM	8.2410	83	1.6863	.1851
Pair 4	ITEMS POOLED MASC	21.8125	80	6.8604	.7670
	ITEMS POOLED FEM	28.1875	80	6.8604	.7670

TABLE 17. SEX

Between-Subjects Factors

	SEX	Mean	Std. Deviation	N
NOUN-TITLES	males	14.2588	6.4076	170
	females	13.7078	6.0502	308
	Total	13.9038	6.1786	478
MODIFIERS	males	7.6118	2.6383	170
	females	7.8084	2.4941	308
	Total	7.7385	2.5453	478
VERBS	males	1.4765	1.8974	170
	females	1.3636	1.6652	308
	Total	1.4038	1.7502	478
ITEMS POOLED	males	23.3471	8.1765	170
	females	22.8799	7.5264	308
	Total	23.0460	7.7585	478

TABLE 18. SEX

Descriptive Statistics

	SEX	AREA	Mean	Std. Deviation	N
NOUN-TITLES	males	Belarus	14.6286	5.4938	35
		Russia	12.2857	5.7284	21
		Moldova	14.3438	6.5432	32
		Canada	16.0392	7.1525	51
		Siberia	12.1613	5.7335	31
		Total	14.2588	6.4076	170

	females	Belarus	13.8696	5.9109	69
		Russia	13.4776	5.4865	67
		Moldova	11.7895	6.1288	57
		Canada	14.8939	6.8481	66
		Siberia	14.4286	5.3813	49
		Total	13.7078	6.0502	308
	Total	Belarus	14.1250	5.7584	104
		Russia	13.1932	5.5354	88
		Moldova	12.7079	6.3643	89
		Canada	15.3932	6.9753	117
		Siberia	13.5500	5.5959	80
		Total	13.9038	6.1786	478
MODIFIERS	males	Belarus	7.7714	2.0449	35
		Russia	6.9048	3.4337	21
		Moldova	8.1562	2.5414	32
		Canada	8.5490	2.2029	51
		Siberia	5.8065	2.5089	31
		Total	7.6118	2.6383	170
	females	Belarus	8.0725	2.2772	69
		Russia	7.6866	2.6008	67
		Moldova	7.4561	3.1114	57
		Canada	8.4848	2.1285	66
		Siberia	7.1020	2.0741	49
		Total	7.8084	2.4941	308
	Total	Belarus	7.9712	2.1965	104
		Russia	7.5000	2.8203	88
		Moldova	7.7079	2.9240	89
		Canada	8.5128	2.1520	117
		Siberia	6.6000	2.3254	80
		Total	7.7385	2.5453	478
VERBS	males	Belarus	1.2000	1.5492	35
		Russia	1.8571	1.9049	21
		Moldova	1.9063	2.3467	32
		Canada	1.2353	1.9245	51
		Siberia	1.4839	1.6707	31
		Total	1.4765	1.8974	170
	females	Belarus	1.0435	1.7015	69
		Russia	1.8060	1.8027	67
		Moldova	1.1228	1.5244	57
		Canada	1.1515	1.6004	66
		Siberia	1.7755	1.5037	49
		Total	1.3636	1.6652	308
	Total	Belarus	1.0962	1.6459	104
		Russia	1.8182	1.8166	88
		Moldova	1.4045	1.8873	89
		Canada	1.1880	1.7416	117
		Siberia	1.6625	1.5666	80
		Total	1.4038	1.7502	478
ITEMS POOLED	males	Belarus	23.6000	6.7528	35
		Russia	21.0476	7.6972	21
		Moldova	24.4063	8.8713	32
		Canada	25.8235	8.4539	51
		Siberia	19.4516	7.3432	31
		Total	23.3471	8.1765	170
	females	Belarus	22.9855	6.3882	69
		Russia	22.9701	7.5156	67
		Moldova	20.3684	8.5745	57
		Canada	24.5303	8.2298	66
		Siberia	23.3061	6.1550	49
		Total	22.8799	7.5264	308
	Total	Belarus	23.1923	6.4868	104
		Russia	22.5114	7.5597	88
		Moldova	21.8202	8.8492	89
		Canada	25.0940	8.3170	117
		Siberia	21.8125	6.8604	80
		Total	23.0460	7.7585	478

TABLE 19. SEX

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
SEX	Pillai's Trace	.006	1.005	3.000	466.000	.390	3.015	.274
	Wilks' Lambda	.994	1.005	3.000	466.000	.390	3.015	.274
	Hotelling's Trace	.006	1.005	3.000	466.000	.390	3.015	.274
	Roy's Largest Root	.006	1.005	3.000	466.000	.390	3.015	.274
AREA	Pillai's Trace	.111	4.501	12.000	1404.000	.000	54.015	1.000
	Wilks' Lambda	.891	4.598	12.000	1233.212	.000	48.537	1.000
	Hotelling's Trace	.121	4.677	12.000	1394.000	.000	56.124	1.000
	Roy's Largest Root	.102	11.899	4.000	468.000	.000	47.598	1.000
SEX * AREA	Pillai's Trace	.031	1.226	12.000	1404.000	.259	14.713	.710
	Wilks' Lambda	.969	1.233	12.000	1233.212	.255	13.035	.642
	Hotelling's Trace	.032	1.238	12.000	1394.000	.251	14.861	.715
	Roy's Largest Root	.030	3.497	4.000	468.000	.008	13.988	.862

a Computed using alpha = .05

b Exact statistic

TABLE 20. SEX

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
SEX	NOUN-TITLES	4.130	1	4.130	.111	.739	.111	.063
	MODIFIERS	10.774	1	10.774	1.768	.184	1.768	.264
	VERBS	2.537	1	2.537	.842	.359	.842	.150
	ITEMS POOLED	.117	1	.117	.002	.964	.002	.050
AREA	NOUN-TITLES	442.220	4	110.555	2.964	.019	11.855	.792
	MODIFIERS	210.604	4	52.651	8.640	.000	34.561	.999
	VERBS	29.043	4	7.261	2.409	.049	9.636	.693
	ITEMS POOLED	842.597	4	210.649	3.623	.006	14.494	.875
SEX*AREA	NOUN-TITLES	289.643	4	72.411	1.941	.103	7.764	.585
	MODIFIERS	46.671	4	11.668	1.915	.107	7.659	.578
	VERBS	12.195	4	3.049	1.012	.401	4.047	.321
	ITEMS POOLED	723.678	4	180.920	3.112	.015	12.448	.814

a Computed using alpha = .05

TABLE 21. AGE BY INTERVALAS (SET 1)

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	104
	2.00	Russia	88
	3.00	Moldova	89
	4.00	Canada	117
	5.00	Siberia	80
AGE	1.00	17 to	131
	2.00	26 to	100
	3.00	36 to	116
	4.00	46 to	79
	5.00	56 to	25
	6.00	66 and older	27

TABLE 22. AGE BY INTERVALAS

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	104
	2.00	Russia	88
	3.00	Moldova	89
	4.00	Canada	117
	5.00	Siberia	80
AGE	1.00	17 to	131
	2.00	26 to	100
	3.00	36 to	116
	4.00	45 and older	131

TABLE 23. AGE BY INTERVALAS

Descriptive Statistics

	AREA	AGE	Mean	Std. Deviation	N
NOUN-TITLES	Belarus	1.00	18.1515	4.1917	33
		2.00	16.3333	3.6056	27
		3.00	10.6552	4.8053	29
		4.00	8.0000	4.5513	15
		Total	14.1250	5.7584	104
	Russia	1.00	16.0909	5.0607	22
		2.00	14.2632	4.6169	19
		3.00	13.0000	5.7710	24
		4.00	9.7391	4.7503	23
		Total	13.1932	5.5354	88
	Moldova	1.00	13.4286	5.5729	21
		2.00	14.4667	8.0611	15
		3.00	13.4762	5.4187	21
		4.00	10.9063	6.4075	32
		Total	12.7079	6.3643	89
	Canada	1.00	19.9091	3.8780	22
		2.00	21.4500	3.2196	20
		3.00	14.6471	6.2855	34
		4.00	10.6341	6.5144	41
		Total	15.3932	6.9753	117
	Siberia	1.00	16.4242	3.2213	33
		2.00	15.9474	5.1151	19
		3.00	10.3750	5.4494	8
		4.00	7.8000	4.2252	20
		Total	13.5500	5.5959	80
	Total	1.00	16.9084	4.7189	131
		2.00	16.6100	5.4604	100
		3.00	12.8017	5.7623	116
		4.00	9.8092	5.7461	131
		Total	13.9038	6.1786	478
MODIFIERS	Belarus	1.00	7.3333	2.2314	33
		2.00	7.9630	2.4255	27
		3.00	8.7241	1.4367	29
		4.00	7.9333	2.6313	15
		Total	7.9712	2.1965	104
	Russia	1.00	7.7273	2.6400	22
		2.00	6.7368	3.3804	19
		3.00	7.2500	2.7858	24
		4.00	8.1739	2.4982	23
		Total	7.5000	2.8203	88
	Moldova	1.00	6.9048	2.4475	21
		2.00	7.6000	3.0659	15
		3.00	8.3810	2.6735	21
		4.00	7.8437	3.2835	32
		Total	7.7079	2.9240	89
	Canada	1.00	7.5455	2.6137	22
		2.00	8.7500	2.1491	20
		3.00	8.6176	2.0303	34
		4.00	8.8293	1.8961	41
		Total	8.5128	2.1520	117
	Siberia	1.00	6.9091	2.0212	33
		2.00	7.3684	2.0873	19
		3.00	7.1250	3.3568	8
		4.00	5.1500	2.0590	20
		Total	6.6000	2.3254	80
	Total	1.00	7.2595	2.3422	131
		2.00	7.7200	2.6594	100
		3.00	8.2155	2.3584	116
		4.00	7.8092	2.7459	131
		Total	7.7385	2.5453	478
VERBS	Belarus	1.00	1.2424	1.5817	33

		2.00	.7407	1.6547	27
		3.00	1.2414	1.3537	29
		4.00	1.1333	2.2636	15
		Total	1.0962	1.6459	104
	Russia	1.00	1.0909	1.3770	22
		2.00	2.1053	2.1316	19
		3.00	2.1667	2.1803	24
		4.00	1.9130	1.3455	23
		Total	1.8182	1.8166	88
	Moldova	1.00	1.1905	1.2091	21
		2.00	2.0000	2.4785	15
		3.00	1.8095	2.4211	21
		4.00	1.0000	1.4591	32
		Total	1.4045	1.8873	89
	Canada	1.00	1.9545	2.2568	22
		2.00	1.1500	1.1367	20
		3.00	1.1176	1.8218	34
		4.00	.8537	1.5258	41
		Total	1.1880	1.7416	117
	Siberia	1.00	1.7576	1.6399	33
		2.00	1.2105	1.2283	19
		3.00	1.3750	2.0659	8
		4.00	2.0500	1.5035	20
		Total	1.6625	1.5666	80
	Total	1.00	1.4580	1.6560	131
		2.00	1.3600	1.7952	100
		3.00	1.5086	1.9493	116
		4.00	1.2901	1.6290	131
		Total	1.4038	1.7502	478
ITEMS POOLED	Belarus	1.00	26.7273	5.0946	33
		2.00	25.0370	5.7811	27
		3.00	20.6207	5.7409	29
		4.00	17.0667	5.6879	15
		Total	23.1923	6.4868	104
	Russia	1.00	24.9091	6.7676	22
		2.00	23.1053	7.9505	19
		3.00	22.4167	8.1182	24
		4.00	19.8261	6.9325	23
		Total	22.5114	7.5597	88
	Moldova	1.00	21.5238	6.5009	21
		2.00	24.0667	11.3859	15
		3.00	23.6667	8.1384	21
		4.00	19.7500	9.1933	32
		Total	21.8202	8.8492	89
	Canada	1.00	29.4091	5.8932	22
		2.00	31.3500	4.6935	20
		3.00	24.3824	7.5559	34
		4.00	20.3171	8.4363	41
		Total	25.0940	8.3170	117
	Siberia	1.00	25.0909	4.7524	33
		2.00	24.5263	5.8535	19
		3.00	18.8750	6.0341	8
		4.00	15.0000	5.7674	20
		Total	21.8125	6.8604	80
	Total	1.00	25.6260	6.0882	131
		2.00	25.6900	7.5888	100
		3.00	22.5259	7.3774	116
		4.00	18.9084	7.8881	131
		Total	23.0460	7.7585	478

TABLE 24. AGE BY INTERVALAS

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
AREA	Pillai's Trace	.139	5.554	12.000	1374.000	.000	66.647	1.000
	Wilks' Lambda	.865	5.674	12.000	1206.754	.000	59.852	1.000
	Hotelling's Trace	.152	5.764	12.000	1364.000	.000	69.172	1.000
	Roy's Largest Root	.119	13.640	4.000	458.000	.000	54.561	1.000
AGE	Pillai's Trace	.305	17.302	9.000	1374.000	.000	155.718	1.000
	Wilks' Lambda	.697	19.699	9.000	1109.935	.000	141.788	1.000
	Hotelling's Trace	.431	21.750	9.000	1364.000	.000	195.753	1.000
	Roy's Largest Root	.422	64.379	3.000	458.000	.000	193.138	1.000
AREA * AGE	Pillai's Trace	.164	2.209	36.000	1374.000	.000	79.510	1.000
	Wilks' Lambda	.844	2.215	36.000	1348.031	.000	78.492	1.000
	Hotelling's Trace	.176	2.220	36.000	1364.000	.000	79.906	1.000
	Roy's Largest Root	.079	3.029	12.000	458.000	.000	36.353	.992

a Computed using alpha = .05

b Exact statistic

c The statistic is an upper bound on F that yields a lower bound on the significance level.

d Design: Intercept+AREA+AGE+AREA * AGE

TABLE 25. AGE BY INTERVALAS

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
AREA	NOUN-TITLES	1040.082	4	260.021	9.701	.000	38.805	1.000
	MODIFIERS	139.583	4	34.896	5.826	.000	23.306	.983
	VERBS	29.165	4	7.291	2.449	.046	9.795	.701
	ITEMS POOLED	1584.961	4	396.240	8.081	.000	32.323	.998
AGE	NOUN-TITLES	4225.411	3	1408.470	52.549	.000	157.648	1.000
	MODIFIERS	29.007	3	9.669	1.614	.185	4.843	.425
	VERBS	1.187	3	.396	.133	.940	.399	.074
	ITEMS POOLED	4010.622	3	1336.874	27.264	.000	81.791	1.000
AREA * AGE	NOUN-TITLES	884.098	12	73.675	2.749	.001	32.985	.985
	MODIFIERS	134.449	12	11.204	1.871	.036	22.448	.902
	VERBS	56.852	12	4.738	1.591	.091	19.093	.835
	ITEMS POOLED	1136.066	12	94.672	1.931	.029	23.169	.913

TABLE 26. EDUCATION

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	104
	2.00	Russia	88
	3.00	Moldova	89
	4.00	Canada	117
	5.00	Siberia	80
EDUCATION	1.00	high school or lower	120
	2.00	technical school	85
	3.00	non-completed university	33
	4.00	university	240

TABLE 27. EDUCATION

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	104
	2.00	Russia	88
	3.00	Moldova	89
	4.00	Canada	117
	5.00	Siberia	80
EDUCATION	1.00	high school or lower	120
	2.00	technical school	85
	3.00	non-completed and completed university	273

TABLE 28. EDUCATION
Descriptive Statistics

	AREA	EDUCATION	Mean	Std. Deviation	N
NOUN-TITLES	Belarus	high school	16.0000	6.5044	27
		technical school	12.6842	4.3340	19
		university	13.7241	5.6717	58
		Total	14.1250	5.7584	104
	Russia	high school	12.5625	4.8300	16
		technical school	13.1818	5.7952	22
		university	13.4000	5.7179	50
		Total	13.1932	5.5354	88
	Moldova	high school	10.3750	6.0276	24
		technical school	11.9444	5.6305	18
		university	14.1915	6.5030	47
		Total	12.7079	6.3643	89
	Canada	high school	16.6190	7.0034	21
		technical school	12.9412	8.0814	17
		university	15.5949	6.6805	79
		Total	15.3932	6.9753	117
	Siberia	high school	12.5313	6.2164	32
		technical school	10.5556	5.2467	9
		university	15.0769	4.7317	39
		Total	13.5500	5.5959	80
	Total	high school	13.6000	6.5560	120
		technical school	12.4824	5.8769	85
		university	14.4799	6.0391	273
		Total	13.9038	6.1786	478
MODIFIERS	Belarus	high school	5.7778	1.9871	27
		technical school	7.0526	2.2230	19
		university	9.2931	1.0089	58
		Total	7.9712	2.1965	104
	Russia	high school	4.0625	2.9090	16
		technical school	8.0000	1.9272	22
		university	8.3800	2.2758	50
		Total	7.5000	2.8203	88
	Moldova	high school	4.5000	2.9782	24
		technical school	8.3889	1.9445	18
		university	9.0851	1.7424	47
		Total	7.7079	2.9240	89
	Canada	high school	5.9048	2.1658	21
		technical school	7.8824	2.3421	17
		university	9.3418	1.3949	79
		Total	8.5128	2.1520	117
	Siberia	high school	5.5625	2.4355	32
		technical school	7.5556	2.1858	9
		university	7.2308	1.9663	39
		Total	6.6000	2.3254	80
	Total	high school	5.2583	2.5388	120
		technical school	7.8000	2.1146	85
		university	8.8095	1.8151	273
		Total	7.7385	2.5453	478
VERBS	Belarus	high school	1.3333	1.8187	27
		technical school	1.4737	2.0102	19
		university	.8621	1.4074	58
		Total	1.0962	1.6459	104
	Russia	high school	2.0625	2.0484	16
		technical school	1.5909	1.8168	22
		university	1.8400	1.7654	50
		Total	1.8182	1.8166	88
	Moldova	high school	.8333	.8681	24
		technical school	1.5556	1.5801	18
		university	1.6383	2.2977	47
		Total	1.4045	1.8873	89
	Canada	high school	1.1905	1.6006	21
		technical school	.5294	.6243	17

		university	1.3291	1.9130	79
		Total	1.1880	1.7416	117
	Siberia	high school	1.9063	1.7663	32
		technical school	1.7778	1.7159	9
		university	1.4359	1.3533	39
		Total	1.6625	1.5666	80
	Total	high school	1.4583	1.6848	120
		technical school	1.3647	1.6536	85
		university	1.3919	1.8120	273
		Total	1.4038	1.7502	478
ITEMS POOLED	Belarus	high school	23.1111	7.5972	27
		technical school	21.2105	5.5636	19
		university	23.8793	6.1760	58
		Total	23.1923	6.4868	104
	Russia	high school	18.6875	7.0211	16
		technical school	22.7727	6.5751	22
		university	23.6200	7.8608	50
		Total	22.5114	7.5597	88
	Moldova	high school	15.7083	7.3690	24
		technical school	21.8889	7.0868	18
		university	24.9149	8.6498	47
		Total	21.8202	8.8492	89
	Canada	high school	23.7143	8.3135	21
		technical school	21.3529	9.6692	17
		university	26.2658	7.8114	79
		Total	25.0940	8.3170	117
	Siberia	high school	20.0000	7.9108	32
		technical school	19.8889	5.0111	9
		university	23.7436	5.8342	39
		Total	21.8125	6.8604	80
	Total	high school	20.3167	8.1064	120
		technical school	21.6471	6.9671	85
		university	24.6813	7.4324	273
		Total	23.0460	7.7585	478

TABLE 29. EDUCATION

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
AREA	Pillai's Trace	.071	2.806	12.000	1389.000	.001	33.672	.988
	Wilks' Lambda	.930	2.840	12.000	1219.983	.001	30.002	.976
	Hotelling's Trace	.075	2.867	12.000	1379.000	.001	34.401	.990
	Roy's Largest Root	.063	7.253	4.000	463.000	.000	29.011	.996
EDUCATION	Pillai's Trace	.374	35.465	6.000	924.000	.000	212.790	1.000
	Wilks' Lambda	.631	39.804	6.000	922.000	.000	238.826	1.000
	Hotelling's Trace	.577	44.227	6.000	920.000	.000	265.363	1.000
	Roy's Largest Root	.562	86.571	3.000	462.000	.000	259.713	1.000
AREA * EDUCATION	Pillai's Trace	.122	2.459	24.000	1389.000	.000	59.022	1.000
	Wilks' Lambda	.882	2.470	24.000	1337.641	.000	57.272	.999
	Hotelling's Trace	.129	2.479	24.000	1379.000	.000	59.493	1.000
	Roy's Largest Root	.079	4.585	8.000	463.000	.000	36.678	.997

a Computed using alpha = .05

b Exact statistic

c The statistic is an upper bound on F that yields a lower bound on the significance level.

d Design: Intercept+AREA+EDUCATION+AREA * EDUCATION

TABLE 30. EDUCATION

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
AREA	NOUN-TITLES	397.115	4	99.279	2.700	.030	10.800	.749
	MODIFIERS	42.675	4	10.669	2.716	.029	10.864	.751
	VERBS	32.117	4	8.029	2.671	.032	10.682	.743
	ITEMS POOLED	421.378	4	105.344	1.911	.107	7.644	.577
EDUCATION	NOUN-TITLES	278.376	2	139.188	3.785	.023	7.571	.689
	MODIFIERS	971.073	2	485.536	123.610	.000	247.220	1.000
	VERBS	.308	2	.154	.051	.950	.102	.058
	ITEMS POOLED	1618.190	2	809.095	14.677	.000	29.354	.999
AREA * EDUCATION	NOUN-TITLES	525.696	8	65.712	1.787	.077	14.297	.767
	MODIFIERS	131.933	8	16.492	4.199	.000	33.588	.995
	VERBS	32.794	8	4.099	1.363	.210	10.908	.625
	ITEMS POOLED	889.516	8	111.190	2.017	.043	16.136	.826

TABLE 31. SOCIAL CLASS

Between-Subjects Factors

		Frequency	Percent	Cumulative Percent
Valid	1.00 intelligencia	74	15.4	15.4
	2.00 white-collar workers	329	68.4	83.8
	3.00 blue-collar workers	78	16.2	100.0
	Total	481	100.0	

TABLE 32. SOCIAL CLASS

Descriptive Statistics

	AREA	SOCIAL CLASS	Mean	Std. Deviation	N
NOUN-TITLES	Belarus	1.00	14.7647	6.3298	17
		2.00	14.3788	5.5130	66
		3.00	12.8095	6.1288	21
		Total	14.1250	5.7584	104
	Russia	1.00	11.9091	5.4673	11
		2.00	13.7778	5.5284	63
		3.00	11.5714	5.5152	14
		Total	13.1932	5.5354	88
	Moldova	1.00	15.1250	7.5297	8
		2.00	12.8333	6.1283	66
		3.00	10.8667	6.6961	15
		Total	12.7079	6.3643	89
	Canada	1.00	17.2692	6.9602	26
		2.00	14.6709	6.7153	79
		3.00	16.0833	8.4041	12
		Total	15.3932	6.9753	117
	Siberia	1.00	16.9167	3.7285	12
		2.00	14.3077	4.8811	52
		3.00	8.5625	6.0108	16
		Total	13.5500	5.5959	80
	Total	1.00	15.6081	6.3652	74
		2.00	14.0092	5.8670	326
		3.00	11.8462	6.7575	78
		Total	13.9038	6.1786	478
MODIFIERS	Belarus	1.00	9.4706	.8745	17
		2.00	8.2576	1.9870	66
		3.00	5.8571	2.1280	21
		Total	7.9712	2.1965	104
	Russia	1.00	8.6364	1.5667	11
		2.00	7.9841	2.5368	63
		3.00	4.4286	2.8747	14
		Total	7.5000	2.8203	88
	Moldova	1.00	9.7500	.4629	8
		2.00	8.1212	2.6283	66
		3.00	4.8000	3.0519	15

		Total	7.7079	2.9240	89
	Canada	1.00	9.4615	.9892	26
		2.00	8.5823	2.1579	79
		3.00	6.0000	2.1320	12
		Total	8.5128	2.1520	117
	Siberia	1.00	7.3333	2.3094	12
		2.00	6.9423	2.0809	52
		3.00	4.9375	2.4622	16
		Total	6.6000	2.3254	80
	Total	1.00	9.0270	1.5258	74
		2.00	8.0460	2.3392	326
		3.00	5.2308	2.5427	78
		Total	7.7385	2.5453	478
VERBS	Belarus	1.00	.4706	.6243	17
		2.00	1.0606	1.5969	66
		3.00	1.7143	2.1481	21
		Total	1.0962	1.6459	104
	Russia	1.00	2.0909	1.7003	11
		2.00	1.6984	1.8017	63
		3.00	2.1429	2.0327	14
		Total	1.8182	1.8166	88
	Moldova	1.00	1.0000	1.6903	8
		2.00	1.6061	2.0522	66
		3.00	.7333	.7988	15
		Total	1.4045	1.8873	89
	Canada	1.00	1.3846	2.1555	26
		2.00	1.1772	1.6928	79
		3.00	.8333	.9374	12
		Total	1.1880	1.7416	117
	Siberia	1.00	1.4167	1.3114	12
		2.00	1.4038	1.3899	52
		3.00	2.6875	1.9225	16
		Total	1.6625	1.5666	80
	Total	1.00	1.2432	1.6946	74
		2.00	1.3773	1.7388	326
		3.00	1.6667	1.8423	78
		Total	1.4038	1.7502	478
ITEMS POOLED	Belarus	1.00	24.7059	6.6027	17
		2.00	23.6970	5.9974	66
		3.00	20.3810	7.3381	21
		Total	23.1923	6.4868	104
	Russia	1.00	22.6364	6.3761	11
		2.00	23.4603	7.6492	63
		3.00	18.1429	6.8709	14
		Total	22.5114	7.5597	88
	Moldova	1.00	25.8750	8.0434	8
		2.00	22.5606	8.6026	66
		3.00	16.4000	8.5340	15
		Total	21.8202	8.8492	89
	Canada	1.00	28.1154	7.7786	26
		2.00	24.4304	8.1942	79
		3.00	22.9167	9.2683	12
		Total	25.0940	8.3170	117
	Siberia	1.00	25.6667	3.9158	12
		2.00	22.6538	6.1417	52
		3.00	16.1875	7.7650	16
		Total	21.8125	6.8604	80
	Total	1.00	25.8784	6.9321	74
		2.00	23.4325	7.4631	326
		3.00	18.7436	8.0718	78
		Total	23.0460	7.7585	478

TABLE 33. SOCIAL CLASS

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
AREA	Pillai's Trace	.107	4.297	12.000	1389.000	.000	51.565	1.000
	Wilks' Lambda	.894	4.386	12.000	1219.983	.000	46.297	.999
	Hotelling's Trace	.116	4.457	12.000	1379.000	.000	53.490	1.000
	Roy's Largest Root	.098	11.356	4.000	463.000	.000	45.423	1.000
SOCIAL CLASS	Pillai's Trace	.219	18.888	6.000	924.000	.000	113.331	1.000
	Wilks' Lambda	.782	20.140	6.000	922.000	.000	120.839	1.000
	Hotelling's Trace	.279	21.395	6.000	920.000	.000	128.372	1.000
	Roy's Largest Root	.278	42.849	3.000	462.000	.000	128.546	1.000
AREA * SOCIAL CLASS	Pillai's Trace	.085	1.683	24.000	1389.000	.021	40.403	.984
	Wilks' Lambda	.917	1.694	24.000	1337.641	.019	39.289	.981
	Hotelling's Trace	.089	1.704	24.000	1379.000	.018	40.901	.985
	Roy's Largest Root	.064	3.714	8.000	463.000	.000	29.709	.987

a Computed using alpha = .05

d Design: Intercept+AREA+SOCIAL CLASS+AREA * SOCIAL CLASS

TABLE 34. SOCIAL CLASS

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
AREA	NOUN-TITLES	470.715	4	117.679	3.236	.012	12.943	.831
	MODIFIERS	103.373	4	25.843	5.249	.000	20.997	.970
	VERBS	43.090	4	10.772	3.632	.006	14.530	.876
	ITEMS POOLED	620.275	4	155.069	2.790	.026	11.159	.764
SOCIAL CLASS	NOUN-TITLES	384.820	2	192.410	5.291	.005	10.581	.835
	MODIFIERS	588.599	2	294.300	59.779	.000	119.557	1.000
	VERBS	4.725	2	2.363	.797	.451	1.593	.186
	ITEMS POOLED	1725.944	2	862.972	15.526	.000	31.052	.999
AREA * SOCIAL CLASS	NOUN-TITLES	475.598	8	59.450	1.635	.113	13.077	.721
	MODIFIERS	31.176	8	3.897	.792	.610	6.333	.371
	VERBS	45.839	8	5.730	1.932	.054	15.457	.806
	ITEMS POOLED	369.644	8	46.206	.831	.575	6.650	.390

a Computed using alpha = .05

TABLE 35. RESIDENCE FROM 3 TO 10 (SET 1)

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	103
	2.00	Russia	86
	3.00	Moldova	88
	4.00	Canada	117
	5.00	Siberia	80
RESIDENCE 3 TO 10	1.00	outside area	74
	2.00	capital	213
	3.00	big cities	68
	4.00	towns	66
	5.00	villages	53

TABLE 36. RESIDENCE FROM 3 TO 10 (SET 1)

Descriptive Statistics

	AREA	RESIDENCE 3 TO 10	Mean	Std. Deviation	N
NOUN-TITLES	Belarus	outside area	11.4286	5.1916	7
		capital	14.3810	5.7570	63
		big cities	16.5000	3.9370	6
		towns	12.5714	5.5845	14
		villages	14.2308	6.5467	13
		Total	14.0388	5.7188	103
	Russia	outside area	11.5000	7.5902	10

		capital	13.4000	5.5696	50
		big cities	14.8750	5.6930	8
		towns	13.9000	5.1088	10
		villages	12.1250	3.3568	8
		Total	13.2558	5.5798	86
	Moldova	outside area	10.1852	5.9552	27
		capital	11.8864	5.4483	44
		big cities	16.0000	7.2111	3
		towns	18.2857	4.5722	7
		villages	19.5714	7.0912	7
		Total	12.6250	6.3523	88
	Canada	outside area	14.0526	7.0905	19
		capital	16.4091	7.6945	22
		big cities	16.1364	6.1553	44
		towns	15.2800	7.8820	25
		villages	11.5714	5.6526	7
		Total	15.3932	6.9753	117
	Siberia	outside area	13.0909	4.6574	11
		capital	15.8824	4.9161	34
		big cities	13.8571	5.2735	7
		towns	14.8000	5.6332	10
		villages	8.6111	4.6291	18
		Total	13.5500	5.5959	80
	Total	outside area	11.9054	6.3141	74
		capital	14.0845	5.8931	213
		big cities	15.7794	5.7895	68
		towns	14.7424	6.4577	66
		villages	12.3585	6.3824	53
		Total	13.8861	6.1795	474
MODIFIERS	Belarus	outside area	7.8571	2.0354	7
		capital	8.0952	2.1903	63
		big cities	8.3333	2.0656	6
		towns	8.5000	1.6984	14
		villages	7.0000	2.6141	13
		Total	8.0097	2.1715	103
	Russia	outside area	5.7000	4.1647	10
		capital	7.5800	2.7560	50
		big cities	8.1250	1.8077	8
		towns	7.6000	2.4585	10
		villages	8.2500	2.3755	8
		Total	7.4767	2.8397	86
	Moldova	outside area	6.9259	3.4633	27
		capital	7.7273	2.8722	44
		big cities	9.0000	1.0000	3
		towns	9.0000	1.0000	7
		villages	8.4286	2.4398	7
		Total	7.6818	2.9304	88
	Canada	outside area	8.9474	1.6490	19
		capital	8.7273	2.3336	22
		big cities	8.6136	2.2227	44
		towns	7.8800	2.3685	25
		villages	8.2857	1.3801	7
		Total	8.5128	2.1520	117
	Siberia	outside area	6.3636	2.5406	11
		capital	7.2647	2.1505	34
		big cities	6.4286	2.5071	7
		towns	7.0000	2.0000	10
		villages	5.3333	2.3009	18
		Total	6.6000	2.3254	80
	Total	outside area	7.2838	3.0945	74
		capital	7.8310	2.5027	213
		big cities	8.3235	2.2088	68
		towns	7.9545	2.1154	66
		villages	6.9811	2.5832	53
		Total	7.7384	2.5458	474
VERBS	Belarus	outside area	.8571	1.8645	7

		capital	1.0476	1.7909	63
		big cities	.6667	.8165	6
		towns	1.6429	1.4991	14
		villages	.9231	1.1875	13
		Total	1.0777	1.6431	103
	Russia	outside area	3.1000	2.0248	10
		capital	1.7200	1.7733	50
		big cities	1.1250	1.3562	8
		towns	2.1000	2.2828	10
		villages	1.2500	1.0351	8
		Total	1.8256	1.8227	86
	Moldova	outside area	1.1852	1.5941	27
		capital	1.3864	2.1590	44
		big cities	.3333	.5774	3
		towns	1.5714	1.2724	7
		villages	2.7143	1.7995	7
		Total	1.4091	1.8976	88
	Canada	outside area	1.0526	1.8995	19
		capital	1.1818	1.6800	22
		big cities	1.5227	2.0057	44
		towns	.5600	.8206	25
		villages	1.7143	1.8898	7
		Total	1.1880	1.7416	117
	Siberia	outside area	1.5455	1.8091	11
		capital	1.5882	1.6718	34
		big cities	1.5714	1.3973	7
		towns	1.6000	.8433	10
		villages	1.9444	1.6968	18
		Total	1.6625	1.5666	80
	Total	outside area	1.4324	1.8733	74
		capital	1.3756	1.8428	213
		big cities	1.3529	1.7684	68
		towns	1.2879	1.4225	66
		villages	1.6604	1.5926	53
		Total	1.4008	1.7532	474
ITEMS POOLED	Belarus	outside area	20.1429	6.8173	7
		capital	23.5238	6.8365	63
		big cities	25.5000	3.7283	6
		towns	22.7143	5.5391	14
		villages	22.1538	6.5935	13
		Total	23.1262	6.4833	103
	Russia	outside area	20.3000	10.4992	10
		capital	22.7000	7.5896	50
		big cities	24.1250	6.3794	8
		towns	23.6000	7.8060	10
		villages	21.6250	5.1530	8
		Total	22.5581	7.6105	86
	Moldova	outside area	18.2963	8.2453	27
		capital	21.0000	8.3749	44
		big cities	25.3333	6.1101	3
		towns	28.8571	4.8452	7
		villages	30.7143	9.1781	7
		Total	21.7159	8.8447	88
	Canada	outside area	24.0526	8.5080	19
		capital	26.3182	8.6541	22
		big cities	26.2727	7.7350	44
		towns	23.7200	9.1993	25
		villages	21.5714	7.0204	7
		Total	25.0940	8.3170	117
	Siberia	outside area	21.0000	5.1381	11
		capital	24.7353	6.1708	34
		big cities	21.8571	6.7683	7
		towns	23.4000	6.3456	10
		villages	15.8889	5.9694	18
		Total	21.8125	6.8604	80
	Total	outside area	20.6216	8.2590	74

		capital	23.2911	7.5517	213
		big cities	25.4559	7.1350	68
		towns	23.9848	7.5212	66
		villages	21.0000	7.9276	53
		Total	23.0253	7.7688	474

TABLE 37. RESIDENCE FROM 3 TO 10 (SET 1)

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
AREA	Pillai's Trace	.083	3.210	12.000	1347.000	.000	38.523	.996
	Wilks' Lambda	.917	3.262	12.000	1182.942	.000	34.450	.990
	Hotelling's Trace	.089	3.304	12.000	1337.000	.000	39.647	.997
	Roy's Largest Root	.077	8.606	4.000	449.000	.000	34.425	.999
RESIDENCE 3 TO 10	Pillai's Trace	.044	1.669	12.000	1347.000	.068	20.033	.863
	Wilks' Lambda	.956	1.684	12.000	1182.942	.065	17.806	.809
	Hotelling's Trace	.046	1.697	12.000	1337.000	.062	20.367	.870
	Roy's Largest Root	.042	4.764	4.000	449.000	.001	19.054	.953
AREA * RESIDENCE 3 TO 10	Pillai's Trace	.156	1.540	48.000	1347.000	.011	73.909	.999
	Wilks' Lambda	.851	1.544	48.000	1330.283	.011	73.462	.999
	Hotelling's Trace	.167	1.548	48.000	1337.000	.010	74.308	.999
	Roy's Largest Root	.093	2.600	16.000	449.000	.001	41.605	.995

a Computed using alpha = .05

c The statistic is an upper bound on F that yields a lower bound on the significance level.

d Design: Intercept+AREA+RESIDENCE 3 TO 10+AREA * RESIDENCE 3 TO 10

TABLE 38. RESIDENCE FROM 3 TO 10 (SET 1)

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
AREA	NOUN-TITLES	163.890	4	40.972	1.163	.326	4.653	.366
	MODIFIERS	156.774	4	39.194	6.467	.000	25.868	.991
	VERBS	25.309	4	6.327	2.103	.079	8.414	.625
	ITEMS POOLED	449.774	4	112.443	2.016	.091	8.064	.603
RESIDENCE 3 TO 10	NOUN-TITLES	399.637	4	99.909	2.837	.024	11.347	.772
	MODIFIERS	34.836	4	8.709	1.437	.021	5.748	.447
	VERBS	9.722	4	2.430	.808	.520	3.232	.259
	ITEMS POOLED	570.810	4	142.702	2.558	.038	10.234	.722
AREA * RESIDENCE 3 TO 10	NOUN-TITLES	1291.818	16	80.739	2.292	.003	36.678	.986
	MODIFIERS	116.485	16	7.280	1.201	.263	19.220	.784
	VERBS	62.741	16	3.921	1.304	.190	20.858	.825
	ITEMS POOLED	1951.348	16	121.959	2.187	.005	34.985	.981

TABLE 39. RESIDENCE FROM 3 TO 10 (SET 2)

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	104
	2.00	Russia	88
	3.00	Moldova	89
	4.00	Canada	117
	5.00	Siberia	80
RESIDENCE 3 TO 10	2.00	capital	222
	3.00	big cities	97
	4.00	towns	89
	5.00	villages	70

TABLE 40. RESIDENCE FROM 3 TO 10 (SET 2)

Descriptive Statistics

	AREA	RESIDENCE 3 TO 10	Mean	Std. Deviation	N
NOUN-TITLES	Belarus	capital	14.4615	5.7827	65
		big cities	14.7143	5.9362	7
		towns	13.0556	5.1618	18
		villages	13.6429	6.6634	14
		Total	14.1250	5.7584	104
	Russia	capital	13.4510	5.5256	51
		big cities	14.3333	6.8931	12
		towns	12.7143	4.9835	14
		villages	11.3636	4.8430	11
		Total	13.1932	5.5354	88
	Moldova	capital	12.1489	5.7293	47
		big cities	9.9333	5.8244	15
		towns	14.3077	5.9074	13
		villages	16.0714	8.0332	14
		Total	12.7079	6.3643	89
	Canada	capital	16.3750	7.6375	24
		big cities	15.8113	6.2728	53
		towns	15.6667	7.4756	30
		villages	10.0000	5.8689	10
		Total	15.3932	6.9753	117
	Siberia	capital	15.8000	4.8677	35
		big cities	15.0000	4.7376	10
		towns	14.4286	5.1398	14
		villages	8.5238	4.3774	21
		Total	13.5500	5.5959	80
	Total	capital	14.1577	5.9247	222
		big cities	14.5567	6.3442	97
		towns	14.2809	6.1033	89
		villages	11.7143	6.4900	70
		Total	13.9038	6.1786	478
MODIFIERS	Belarus	capital	8.0308	2.2148	65
		big cities	8.5714	1.9881	7
		towns	8.2222	1.8960	18
		villages	7.0714	2.5257	14
		Total	7.9712	2.1965	104
	Russia	capital	7.4314	2.9275	51
		big cities	7.2500	2.9271	12
		towns	8.0000	2.2532	14
		villages	7.4545	3.1421	11
		Total	7.5000	2.8203	88
	Moldova	capital	7.7021	2.9408	47
		big cities	7.6667	3.1773	15
		towns	8.1538	2.5770	13
		villages	7.3571	3.1527	14
		Total	7.7079	2.9240	89
	Canada	capital	8.8333	2.2586	24
		big cities	8.6604	2.1208	53
		towns	8.0667	2.2581	30
		villages	8.3000	1.7670	10
		Total	8.5128	2.1520	117
	Siberia	capital	7.2286	2.1294	35
		big cities	6.5000	2.1731	10
		towns	6.9286	2.0178	14
		villages	5.3810	2.5588	21
		Total	6.6000	2.3254	80
	Total	capital	7.7838	2.5699	222
		big cities	8.1031	2.4811	97
		towns	7.9213	2.1962	89
		villages	6.8571	2.8093	70
		Total	7.7385	2.5453	478
VERBS	Belarus	capital	1.0769	1.7793	65
		big cities	.5714	.7868	7
		towns	1.5556	1.6881	18

		villages	.8571	1.1673	14
		Total	1.0962	1.6459	104
	Russia	capital	1.7647	1.7842	51
		big cities	1.9167	2.1088	12
		towns	2.0714	2.1649	14
		villages	1.6364	1.2863	11
		Total	1.8182	1.8166	88
	Moldova	capital	1.3404	2.1087	47
		big cities	1.0000	1.3093	15
		towns	1.6154	1.5566	13
		villages	1.8571	1.9556	14
		Total	1.4045	1.8873	89
	Canada	capital	1.4583	2.1260	24
		big cities	1.3774	1.8732	53
		towns	.5667	.8976	30
		villages	1.4000	1.7127	10
		Total	1.1880	1.7416	117
	Siberia	capital	1.5429	1.6688	35
		big cities	1.4000	1.2649	10
		towns	1.5714	.9376	14
		villages	2.0476	1.8568	21
		Total	1.6625	1.5666	80
	Total	capital	1.4054	1.8781	222
		big cities	1.3299	1.7183	97
		towns	1.3146	1.5120	89
		villages	1.6143	1.6707	70
		Total	1.4038	1.7502	478
ITEMS POOLED	Belarus	capital	23.5692	6.7915	65
		big cities	23.8571	5.5205	7
		towns	22.8333	5.7625	18
		villages	21.5714	6.6992	14
		Total	23.1923	6.4868	104
	Russia	capital	22.6471	7.5228	51
		big cities	23.5000	8.9290	12
		towns	22.7857	6.9413	14
		villages	20.4545	7.6074	11
		Total	22.5114	7.5597	88
	Moldova	capital	21.1915	8.4690	47
		big cities	18.6000	7.9982	15
		towns	24.0769	7.5328	13
		villages	25.2857	11.1178	14
		Total	21.8202	8.8492	89
	Canada	capital	26.6667	8.9086	24
		big cities	25.8491	7.5534	53
		towns	24.3000	8.8907	30
		villages	19.7000	7.7467	10
		Total	25.0940	8.3170	117
	Siberia	capital	24.5714	6.1562	35
		big cities	22.9000	5.8963	10
		towns	22.9286	5.9545	14
		villages	15.9524	5.6522	21
		Total	21.8125	6.8604	80
	Total	capital	23.3468	7.5980	222
		big cities	23.9897	7.8189	97
		towns	23.5169	7.2834	89
		villages	20.1857	8.2695	70
		Total	23.0460	7.7585	478

TALBE 41. RESIDENCE FROM 3 TO 10 (SET 2)

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
AREA	Pillai's Trace	.078	3.070	12.000	1374.000	.000	36.836	.994
	Wilks' Lambda	.923	3.108	12.000	1206.754	.000	32.828	.986
	Hotelling's Trace	.083	3.137	12.000	1364.000	.000	37.649	.995
	Roy's Largest Root	.068	7.755	4.000	458.000	.000	31.022	.998
RESIDENCE 3 TO 10	Pillai's Trace	.029	1.506	9.000	1374.000	.140	13.557	.724
	Wilks' Lambda	.971	1.514	9.000	1109.935	.138	11.040	.612
	Hotelling's Trace	.030	1.520	9.000	1364.000	.136	13.677	.728
	Roy's Largest Root	.028	4.289	3.000	458.000	.005	12.866	.864
AREA * RESIDENCE 3 TO 10	Pillai's Trace	.106	1.393	36.000	1374.000	.062	50.150	.990
	Wilks' Lambda	.897	1.402	36.000	1348.031	.059	49.678	.990
	Hotelling's Trace	.112	1.410	36.000	1364.000	.056	50.753	.991
	Roy's Largest Root	.075	2.869	12.000	458.000	.001	34.433	.989

a Computed using alpha = .05

b Exact statistic

c The statistic is an upper bound on F that yields a lower bound on the significance level.

d Design: Intercept+AREA+RESIDENCE 3 TO 10+AREA * RESIDENCE 3 TO 10

TALBE 42. RESIDENCE FROM 3 TO 10 (SET 2)

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
AREA	NOUN-TITLES	110.672	4	27.668	.778	.540	3.113	.250
	MODIFIERS	145.634	4	36.409	5.903	.000	23.611	.984
	VERBS	27.384	4	6.846	2.254	.062	9.016	.659
	ITEMS POOLED	270.724	4	67.681	1.192	.313	4.768	.375
RESIDENCE 3 TO 10	NOUN-TITLES	317.633	3	105.878	2.978	.031	8.934	.704
	MODIFIERS	29.190	3	9.730	1.577	.194	4.732	.416
	VERBS	3.164	3	1.055	.347	.791	1.042	.118
	ITEMS POOLED	496.639	3	165.546	2.916	.034	8.747	.693
AREA * RESIDENCE 3 TO 10	NOUN-TITLES	1135.554	12	94.630	2.662	.002	31.939	.982
	MODIFIERS	44.677	12	3.723	.604	.840	7.243	.353
	VERBS	31.991	12	2.666	.878	.570	10.533	.520
	ITEMS POOLED	1402.831	12	116.903	2.059	.018	24.709	.932

TABLE 43. PARENTS' AREA

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	104
	2.00	Russia	86
	3.00	Moldova	89
	4.00	Canada	116
	5.00	Siberia	79
PARENTS' AREA	1.00	outside area both	101
	2.00	inside area both	290
	3.00	mixed outside/inside area	83

TABLE 44. PARENTS' AREA

Descriptive Statistics

	AREA	PARENTAR	Mean	Std. Deviation	N
NOUN-TITLES	Belarus	outside republic both	12.1364	5.8578	22
		inside republic both	14.8485	5.7706	66
		mixed outside/inside area	13.8750	5.2138	16
		Total	14.1250	5.7584	104
	Russia	outside republic both	12.0000	7.6158	10
		inside republic both	13.2319	5.1397	69

		mixed outside/inside area	13.4286	6.9007	7
		Total	13.1047	5.5498	86
	Moldova	outside republic both	11.1714	5.7980	35
		inside republic both	12.5833	6.5263	36
		mixed outside/inside area	15.9444	6.2259	18
		Total	12.7079	6.3643	89
	Canada	outside republic both	14.6522	7.5173	23
		inside republic both	15.8169	6.6533	71
		mixed outside/inside area	15.1364	7.6239	22
		Total	15.4569	6.9712	116
	Siberia	outside republic both	12.9091	4.8878	11
		inside republic both	14.5417	5.6680	48
		mixed outside/inside area	12.0000	5.3014	20
		Total	13.6709	5.5255	79
	Total	outside republic both	12.4455	6.3584	101
		inside republic both	14.3690	6.0074	290
		mixed outside/inside area	14.1687	6.3281	83
		Total	13.9241	6.1756	474
MODIFIERS	Belarus	outside republic both	8.8182	1.4019	22
		inside republic both	7.6515	2.3369	66
		mixed outside/inside area	8.1250	2.2767	16
		Total	7.9712	2.1965	104
	Russia	outside republic both	6.7000	3.9455	10
		inside republic both	7.6232	2.7605	69
		mixed outside/inside area	7.2857	1.9760	7
		Total	7.4884	2.8481	86
	Moldova	outside republic both	7.0571	3.4466	35
		inside republic both	8.0278	2.4898	36
		mixed outside/inside area	8.3333	2.4971	18
		Total	7.7079	2.9240	89
	Canada	outside republic both	8.8696	1.5464	23
		inside republic both	8.2958	2.3688	71
		mixed outside/inside area	8.7727	1.9744	22
		Total	8.5000	2.1569	116
	Siberia	outside republic both	7.2727	2.0538	11
		inside republic both	6.5208	2.4320	48
		mixed outside/inside area	6.3000	2.2266	20
		Total	6.5696	2.3243	79
	Total	outside republic both	7.8416	2.7631	101
		inside republic both	7.6621	2.5348	290
		mixed outside/inside area	7.8313	2.3624	83
		Total	7.7300	2.5524	474
VERBS	Belarus	outside republic both	1.5455	2.0407	22
		inside republic both	1.1061	1.6279	66
		mixed outside/inside area	.4375	.7274	16
		Total	1.0962	1.6459	104
	Russia	outside republic both	2.9000	1.8529	10
		inside republic both	1.5507	1.7281	69
		mixed outside/inside area	2.4286	1.9881	7
		Total	1.7791	1.8046	86
	Moldova	outside republic both	.9714	1.5046	35
		inside republic both	1.3056	1.4106	36
		mixed outside/inside area	2.4444	2.8743	18
		Total	1.4045	1.8873	89
	Canada	outside republic both	1.2174	2.0661	23
		inside republic both	1.1549	1.6004	71
		mixed outside/inside area	1.3182	1.9120	22
		Total	1.1983	1.7457	116
	Siberia	outside republic both	1.3636	1.1201	11
		inside republic both	1.6875	1.4754	48
		mixed outside/inside area	1.8500	1.9808	20
		Total	1.6835	1.5652	79
	Total	outside republic both	1.3861	1.8219	101
		inside republic both	1.3448	1.6018	290
		mixed outside/inside area	1.6145	2.1117	83
		Total	1.4008	1.7471	474

ITEMS POOLED	Belarus	outside republic both	22.5000	6.4936	22
		inside republic both	23.6061	6.8543	66
		mixed outside/inside area	22.4375	4.9257	16
		Total	23.1923	6.4868	104
	Russia	outside republic both	21.6000	11.0875	10
		inside republic both	22.4058	7.2341	69
		mixed outside/inside area	23.1429	5.9281	7
		Total	22.3721	7.5818	86
	Moldova	outside republic both	19.2000	8.3905	35
		inside republic both	21.9167	8.3542	36
		mixed outside/inside area	26.7222	9.0151	18
		Total	21.8202	8.8492	89
	Canada	outside republic both	24.7391	9.2943	23
		inside republic both	25.2676	7.7348	71
		mixed outside/inside area	25.2273	9.4614	22
		Total	25.1552	8.3266	116
	Siberia	outside republic both	21.5455	5.9727	11
		inside republic both	22.7500	6.9297	48
		mixed outside/inside area	20.1500	6.9908	20
		Total	21.9241	6.8309	79
	Total	outside republic both	21.6733	8.4192	101
		inside republic both	23.3759	7.4216	290
		mixed outside/inside area	23.6145	8.0089	83
		Total	23.0549	7.7643	474

TABLE 45. PARENTS' AREA

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
AREA	Pillai's Trace	.097	3.833	12.000	1377.000	.000	46.000	.999
	Wilks' Lambda	.904	3.899	12.000	1209.400	.000	41.173	.998
	Hotelling's Trace	.104	3.952	12.000	1367.000	.000	47.425	.999
	Roy's Largest Root	.087	9.961	4.000	459.000	.000	39.842	1.000
PARENTS'AREA	Pillai's Trace	.020	1.536	6.000	916.000	.163	9.216	.598
	Wilks' Lambda	.980	1.537	6.000	914.000	.163	9.220	.598
	Hotelling's Trace	.020	1.537	6.000	912.000	.163	9.223	.598
	Roy's Largest Root	.017	2.657	3.000	458.000	.048	7.971	.648
AREA * PARENTS'AREA	Pillai's Trace	.075	1.479	24.000	1377.000	.064	35.489	.965
	Wilks' Lambda	.926	1.477	24.000	1326.040	.064	34.256	.957
	Hotelling's Trace	.078	1.475	24.000	1367.000	.065	35.396	.964
	Roy's Largest Root	.040	2.298	8.000	459.000	.020	18.380	.880

a Computed using alpha = .05

b Design: Intercept+AREA+PARENT'S AREA+AREA * PARENTS' AREA

TABLE 46. PARENTS' AREA

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
AREA	NOUN-TITLES	252.493	4	63.123	1.701	.149	6.803	.522
	MODIFIERS	152.817	4	38.204	6.209	.000	24.836	.988
	VERBS	45.107	4	11.277	3.829	.005	15.316	.895
	ITEMS POOLED	529.225	4	132.306	2.257	.062	9.028	.660
PARENTS' AREA	NOUN-TITLES	169.476	2	84.738	2.283	.103	4.567	.464
	MODIFIERS	1.627	2	.814	.132	.876	.264	.070
	VERBS	8.131	2	4.066	1.381	.252	2.761	.297
	ITEMS POOLED	124.933	2	62.466	1.066	.345	2.131	.237
AREA* PARENT'S AREA	NOUN-TITLES	285.061	8	35.633	.960	.467	7.681	.450
	MODIFIERS	67.615	8	8.452	1.374	.206	10.989	.629
	VERBS	52.909	8	6.614	2.246	.023	17.965	.871
	ITEMS POOLED	593.515	8	74.189	1.266	.259	10.124	.585

TABLE 47. PARENTS' ORIGIN

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	101
	2.00	Russia	85
	3.00	Moldova	85
	4.00	Canada	112
	5.00	Siberia	78
PARENTS' ORIGIN	1.00	both rural	159
	2.00	both urban	228
	3.00	mixed rural/urban	74

TABLE 48. PARENTS' ORIGIN

Descriptive Statistics

	AREA	PARENTS' ORIGIN	Mean	Std. Deviation	N
NOUN-TITLES	Belarus	both rural	13.5192	5.7514	52
		both urban	14.5333	5.7400	30
		mixed rural/urban	14.8421	5.9746	19
		Total	14.0693	5.7607	101
	Russia	both rural	12.0400	5.1274	25
		both urban	13.5116	5.5992	43
		mixed rural/urban	14.3529	6.3141	17
		Total	13.2471	5.6123	85
	Moldova	both rural	13.8750	6.1736	32
		both urban	12.1277	6.3301	47
		mixed rural/urban	11.8333	8.2321	6
		Total	12.7647	6.3876	85
	Canada	both rural	14.5278	6.4342	36
		both urban	16.1111	6.8347	63
		mixed rural/urban	14.9231	8.4109	13
		Total	15.4643	6.8811	112
	Siberia	both rural	10.2857	4.7138	14
		both urban	15.5333	4.6495	45
		mixed rural/urban	11.8947	6.4884	19
		Total	13.7051	5.5528	78
	Total	both rural	13.3019	5.8847	159
		both urban	14.4781	6.1123	228
		mixed rural/urban	13.7432	6.7845	74
		Total	13.9544	6.1584	461
MODIFIERS	Belarus	both rural	7.7308	2.3189	52
		both urban	8.3333	1.8257	30
		mixed rural/urban	8.1053	2.3308	19
		Total	7.9802	2.1817	101
	Russia	both rural	7.0000	3.0414	25
		both urban	7.3721	3.0785	43
		mixed rural/urban	8.5294	1.6627	17
		Total	7.4941	2.8645	85
	Moldova	both rural	7.2500	3.3505	32
		both urban	7.6383	2.8008	47
		mixed rural/urban	9.3333	.8165	6
		Total	7.6118	2.9564	85
	Canada	both rural	8.5278	2.0352	36
		both urban	8.4762	2.3545	63
		mixed rural/urban	8.3077	1.8879	13
		Total	8.4732	2.1891	112
	Siberia	both rural	6.0000	3.0128	14
		both urban	7.0889	2.0651	45
		mixed rural/urban	5.8421	2.1925	19
		Total	6.5897	2.3324	78
	Total	both rural	7.5472	2.7414	159
		both urban	7.8026	2.5327	228
		mixed rural/urban	7.7568	2.2684	74
		Total	7.7072	2.5646	461
VERBS	Belarus	both rural	1.1923	1.6808	52
		both urban	1.0333	1.9384	30
		mixed rural/urban	.8421	1.0145	19

		Total	1.0792	1.6534	101
	Russia	both rural	1.8800	1.7870	25
		both urban	1.5349	1.7092	43
		mixed rural/urban	2.3529	2.0292	17
		Total	1.8000	1.8048	85
	Moldova	both rural	1.8125	2.3201	32
		both urban	1.0638	1.3417	47
		mixed rural/urban	2.5000	2.8810	6
		Total	1.4471	1.9180	85
	Canada	both rural	1.2778	1.5786	36
		both urban	1.2222	1.7911	63
		mixed rural/urban	.6154	.8697	13
		Total	1.1696	1.6434	112
	Siberia	both rural	2.3571	2.1342	14
		both urban	1.4889	1.4400	45
		mixed rural/urban	1.6842	1.3355	19
		Total	1.6923	1.5734	78
	Total	both rural	1.5472	1.8783	159
		both urban	1.2763	1.6441	228
		mixed rural/urban	1.5000	1.6737	74
		Total	1.4056	1.7340	461
ITEMS POOLED	Belarus	both rural	22.4423	6.6197	52
		both urban	23.9000	6.1775	30
		mixed rural/urban	23.7895	6.9248	19
		Total	23.1287	6.5233	101
	Russia	both rural	20.9200	8.1031	25
		both urban	22.4186	7.4202	43
		mixed rural/urban	25.2353	7.2416	17
		Total	22.5412	7.6509	85
	Moldova	both rural	22.9375	9.5476	32
		both urban	20.8298	8.3804	47
		mixed rural/urban	23.6667	10.7641	6
		Total	21.8235	8.9591	85
	Canada	both rural	24.3333	7.5100	36
		both urban	25.8095	8.4431	63
		mixed rural/urban	23.8462	8.9708	13
		Total	25.1071	8.1830	112
	Siberia	both rural	18.6429	6.5704	14
		both urban	24.1111	5.5359	45
		mixed rural/urban	19.4211	8.2349	19
		Total	21.9872	6.8519	78
	Total	both rural	22.3962	7.7819	159
		both urban	23.5570	7.6141	228
		mixed rural/urban	23.0000	8.1257	74
		Total	23.0672	7.7565	461

TABLE 49. PARENTS' ORIGIN

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
AREA	Pillai's Trace	.126	4.871	12.000	1338.000	.000	58.447	1.000
	Wilks' Lambda	.877	4.981	12.000	1175.005	.000	52.563	1.000
	Hotelling's Trace	.137	5.069	12.000	1328.000	.000	60.830	1.000
	Roy's Largest Root	.112	12.525	4.000	446.000	.000	50.099	1.000
PARENTS' ORIGIN	Pillai's Trace	.037	2.825	6.000	890.000	.010	16.948	.888
	Wilks' Lambda	.963	2.833	6.000	888.000	.010	16.997	.889
	Hotelling's Trace	.038	2.841	6.000	886.000	.010	17.045	.890
	Roy's Largest Root	.033	4.950	3.000	445.000	.002	14.850	.912
AREA * PARENTS' ORIGIN	Pillai's Trace	.067	1.271	24.000	1338.000	.172	30.500	.926
	Wilks' Lambda	.935	1.268	24.000	1288.336	.174	29.414	.914
	Hotelling's Trace	.069	1.265	24.000	1328.000	.176	30.367	.925
	Roy's Largest Root	.030	1.661	8.000	446.000	.106	13.288	.729

c The statistic is an upper bound on F that yields a lower bound on the significance level.

TABLE 50. PARENTS' ORIGIN

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
AREA	NOUN-TITLES	333.394	4	83.348	2.263	.062	9.052	.661
	MODIFIERS	175.989	4	43.997	7.087	.000	28.349	.995
	VERBS	58.966	4	14.741	5.035	.001	20.141	.963
	ITEMS POOLED	549.001	4	137.250	2.349	.054	9.397	.680
PARENTS' ORIGIN	NOUN-TITLES	189.973	2	94.986	2.579	.077	5.158	.514
	MODIFIERS	28.216	2	14.108	2.273	.104	4.545	.462
	VERBS	16.921	2	8.461	2.890	.057	5.780	.564
	ITEMS POOLED	205.803	2	102.902	1.761	.173	3.523	.369
AREA * PARENTS' ORIGIN	NOUN-TITLES	455.301	8	56.913	1.545	.139	12.362	.691
	MODIFIERS	62.329	8	7.791	1.255	.265	10.040	.581
	VERBS	27.102	8	3.388	1.157	.324	9.257	.539
	ITEMS POOLED	759.336	8	94.917	1.625	.115	12.997	.718

TABLE 51. FATHER'S EDUCATION

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	102
	2.00	Russia	88
	3.00	Moldova	88
	4.00	Canada	117
	5.00	Siberia	75
FATHER'S EDUCATION	1.00	high school	189
	2.00	technical school	64
	3.00	university	217

TABLE 52. FATHER'S EDUCATION

Descriptive Statistics

	AREA	FATHER'S EDUCATION	Mean	Std. Deviation	N
NOUN-TITLES	Belarus	high school	11.1071	5.1449	28
		technical school	13.9231	5.5145	13
		university	15.5902	5.6961	61
		Total	14.1471	5.8129	102
	Russia	high school	11.8438	6.0221	32
		technical school	13.6667	4.4024	15
		university	14.0732	5.4240	41
		Total	13.1932	5.5354	88
	Moldova	high school	11.5909	6.8686	44
		technical school	12.0000	6.2075	16
		university	14.7500	5.3307	28
		Total	12.6705	6.3909	88
	Canada	high school	13.7925	7.1046	53
		technical school	13.0000	6.3403	11
		university	17.4906	6.4826	53
		Total	15.3932	6.9753	117
	Siberia	high school	11.0625	5.7302	32
		technical school	15.5556	5.4109	9
		university	15.9118	4.3857	34
		Total	13.8000	5.5823	75
	Total	high school	12.0899	6.4154	189
		technical school	13.4531	5.5347	64
		university	15.7097	5.6995	217
		Total	13.9468	6.1995	470
MODIFIERS	Belarus	high school	7.6429	2.3760	28
		technical school	7.6154	2.5013	13
		university	8.2623	2.0158	61
		Total	8.0098	2.1823	102
	Russia	high school	6.7813	2.9918	32
		technical school	8.3333	1.3452	15
		university	7.7561	2.9982	41

		Total	7.5000	2.8203	88
	Moldova	high school	7.1591	3.1838	44
		technical school	8.0000	2.8983	16
		university	8.3214	2.4351	28
		Total	7.6818	2.9304	88
	Canada	high school	8.6038	1.9936	53
		technical school	8.1818	2.1826	11
		university	8.4906	2.3256	53
		Total	8.5128	2.1520	117
	Siberia	high school	5.9688	2.7764	32
		technical school	7.5556	1.1304	9
		university	7.0588	1.9375	34
		Total	6.6533	2.3278	75
	Total	high school	7.3704	2.7963	189
		technical school	7.9688	2.1453	64
		university	8.0415	2.3772	217
		Total	7.7617	2.5415	470
VERBS	Belarus	high school	.8929	1.1001	28
		technical school	1.3077	1.6525	13
		university	1.1803	1.8664	61
		Total	1.1176	1.6548	102
	Russia	high school	1.8750	1.8272	32
		technical school	2.0000	2.1044	15
		university	1.7073	1.7356	41
		Total	1.8182	1.8166	88
	Moldova	high school	1.4318	2.0046	44
		technical school	1.6250	1.5438	16
		university	1.1786	1.9255	28
		Total	1.3864	1.8903	88
	Canada	high school	1.0000	1.5933	53
		technical school	1.0909	1.2210	11
		university	1.3962	1.9645	53
		Total	1.1880	1.7416	117
	Siberia	high school	1.7813	1.6011	32
		technical school	.8889	1.0541	9
		university	1.6176	1.6146	34
		Total	1.6000	1.5596	75
	Total	high school	1.3651	1.7070	189
		technical school	1.4531	1.6127	64
		university	1.4009	1.8335	217
		Total	1.3936	1.7511	470
ITEMS POOLED	Belarus	high school	19.6429	5.2084	28
		technical school	22.8462	6.3093	13
		university	25.0328	6.4807	61
		Total	23.2745	6.5175	102
	Russia	high school	20.5000	8.7584	32
		technical school	24.0000	4.5356	15
		university	23.5366	7.2460	41
		Total	22.5114	7.5597	88
	Moldova	high school	20.1818	10.0285	44
		technical school	21.6250	7.5708	16
		university	24.2500	7.1265	28
		Total	21.7386	8.8662	88
	Canada	high school	23.3962	8.2842	53
		technical school	22.2727	8.4391	11
		university	27.3774	7.8770	53
		Total	25.0940	8.3170	117
	Siberia	high school	18.8125	7.6472	32
		technical school	24.0000	5.2202	9
		university	24.5882	5.3999	34
		Total	22.0533	6.9572	75
	Total	high school	20.8254	8.4291	189
		technical school	22.8750	6.4427	64
		university	25.1521	7.0000	217
		Total	23.1021	7.7887	470

TABLE 53. FATHER'S EDUCATION

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
AREA	Pillai's Trace	.060	2.308	12.000	1365.000	.006	27.697	.963
	Wilks' Lambda	.941	2.311	12.000	1198.817	.006	24.428	.933
	Hotelling's Trace	.061	2.311	12.000	1355.000	.006	27.727	.963
	Roy's Largest Root	.038	4.268	4.000	455.000	.002	17.070	.927
FATHER'S EDUCATION	Pillai's Trace	.085	6.691	6.000	908.000	.000	40.149	1.000
	Wilks' Lambda	.916	6.815	6.000	906.000	.000	40.888	1.000
	Hotelling's Trace	.092	6.937	6.000	904.000	.000	41.625	1.000
	Roy's Largest Root	.090	13.587	3.000	454.000	.000	40.760	1.000
AREA * FATHER'S EDUCATION	Pillai's Trace	.041	.787	24.000	1365.000	.757	18.891	.694
	Wilks' Lambda	.960	.786	24.000	1314.439	.758	18.238	.673
	Hotelling's Trace	.042	.785	24.000	1355.000	.759	18.849	.693
	Roy's Largest Root	.025	1.426	8.000	455.000	.183	11.406	.649

c The statistic is an upper bound on F that yields a lower bound on the significance level.

d Design: Intercept+AREA+FATHER'S EDUCATION+AREA * FATHER'S EDUCATION

TABLE 54. FATHER'S EDUCATION

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
AREA	NOUN-TITLES	173.277	4	43.319	1.226	.299	4.906	.385
	MODIFIERS	75.466	4	18.867	3.105	.015	12.422	.813
	VERBS	24.827	4	6.207	2.030	.089	8.121	.607
	ITEMS POOLED	226.046	4	56.511	1.006	.404	4.025	.319
FATHER'S EDUCATION	NOUN-TITLES	1284.253	2	642.127	18.179	.000	36.359	1.000
	MODIFIERS	57.800	2	28.900	4.757	.009	9.514	.792
	VERBS	.6797	2	.3398	.011	.989	.022	.052
	ITEMS POOLED	1871.771	2	935.885	16.665	.000	33.330	1.000
AREA*FATHERS' EDUCATION	NOUN-TITLES	207.432	8	25.929	.734	.661	5.873	.343
	MODIFIERS	45.079	8	5.635	.927	.493	7.420	.435
	VERBS	14.925	8	1.866	.610	.770	4.882	.284
	ITEMS POOLED	285.869	8	35.734	.636	.747	5.090	.297

TABLE 55. MOTHER'S EDUCATION

Between-Subjects Factors

		Value Label	N
AREA	1.00	Belarus	104
	2.00	Russia	88
	3.00	Moldova	88
	4.00	Canada	117
	5.00	Siberia	80
MOTHER'S EDUCATION	1.00	high school	186
	2.00	technical school	85
	3.00	university	206

TABLE 56. MOTHER'S EDUCATION

Descriptive Statistics

	AREA	MOTHER'S EDUCATION	Mean	Std. Deviation	N
NOUN-TITLES	Belarus	high school	10.8571	4.9495	28
		technical school	15.0000	5.5720	22
		university	15.4630	5.6459	54
		Total	14.1250	5.7584	104

	Russia	high school	12.4375	5.9835	32
		technical school	13.2632	4.3569	19
		university	13.8108	5.7293	37
		Total	13.1932	5.5354	88
	Moldova	high school	11.6744	6.6752	43
		technical school	12.2500	6.4226	20
		university	14.7200	5.5791	25
		Total	12.6705	6.3909	88
	Canada	high school	13.2200	7.2767	50
		technical school	16.1538	5.5052	13
		university	17.2222	6.5320	54
		Total	15.3932	6.9753	117
	Siberia	high school	11.1818	5.5647	33
		technical school	15.3636	4.6962	11
		university	15.1667	5.2016	36
		Total	13.5500	5.5959	80
	Total	high school	12.0108	6.3126	186
		technical school	14.1882	5.4913	85
		university	15.4854	5.8898	206
		Total	13.8994	6.1843	477
MODIFIERS	Belarus	high school	7.3929	2.5142	28
		technical school	7.8636	2.4745	22
		university	8.3148	1.8513	54
		Total	7.9712	2.1965	104
	Russia	high school	6.8750	2.8821	32
		technical school	8.0526	2.2478	19
		university	7.7568	2.9945	37
		Total	7.5000	2.8203	88
	Moldova	high school	7.1628	3.3305	43
		technical school	7.9500	2.7810	20
		university	8.3600	2.1385	25
		Total	7.6818	2.9304	88
	Canada	high school	8.4000	2.1853	50
		technical school	8.6154	1.8947	13
		university	8.5926	2.2108	54
		Total	8.5128	2.1520	117
	Siberia	high school	5.6364	2.2751	33
		technical school	8.0000	1.4142	11
		university	7.0556	2.2797	36
		Total	6.6000	2.3254	80
	Total	high school	7.2097	2.8004	186
		technical school	8.0588	2.2749	85
		university	8.0728	2.3331	206
		Total	7.7338	2.5459	477
VERBS	Belarus	high school	.8929	1.1001	28
		technical school	1.1364	1.6123	22
		university	1.1852	1.8941	54
		Total	1.0962	1.6459	104
	Russia	high school	2.0625	1.8826	32
		technical school	1.5263	1.7754	19
		university	1.7568	1.8013	37
		Total	1.8182	1.8166	88
	Moldova	high school	1.3256	1.9238	43
		technical school	1.6500	1.8994	20
		university	1.2800	1.8824	25
		Total	1.3864	1.8903	88
	Canada	high school	1.0600	1.6464	50
		technical school	1.0769	1.1875	13
		university	1.3333	1.9426	54
		Total	1.1880	1.7416	117
	Siberia	high school	1.6970	1.6861	33
		technical school	2.3636	1.8586	11
		university	1.4167	1.3175	36
		Total	1.6625	1.5666	80
	Total	high school	1.3817	1.7272	186
		technical school	1.4941	1.7087	85

		university	1.3786	1.7949	206
		Total	1.4004	1.7505	477
ITEMS POOLED	Belarus	high school	19.1429	5.1619	28
		technical school	24.0000	6.2335	22
		university	24.9630	6.3779	54
		Total	23.1923	6.4868	104
	Russia	high school	21.3750	8.2335	32
		technical school	22.8421	4.5002	19
		university	23.3243	8.2295	37
		Total	22.5114	7.5597	88
	Moldova	high school	20.1628	9.6878	43
		technical school	21.8500	8.4559	20
		university	24.3600	7.2450	25
		Total	21.7386	8.8662	88
	Canada	high school	22.6800	8.7725	50
		technical school	25.8462	7.0219	13
		university	27.1481	7.6907	54
		Total	25.0940	8.3170	117
	Siberia	high school	18.5152	6.3988	33
		technical school	25.7273	5.5873	11
		university	23.6389	6.4327	36
		Total	21.8125	6.8604	80
	Total	high school	20.6022	8.1508	186
		technical school	23.7412	6.5758	85
		university	24.9369	7.2805	206
		Total	23.0335	7.7619	477

TABLE 57. MOTHER'S EDUCATION

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
AREA	Pillai's Trace	.081	3.208	12.000	1386.000	.000	38.501	.996
	Wilks' Lambda	.920	3.241	12.000	1217.337	.000	34.231	.990
	Hotelling's Trace	.085	3.264	12.000	1376.000	.000	39.168	.996
	Roy's Largest Root	.066	7.643	4.000	462.000	.000	30.574	.997
MOTHER'S EDUCATION	Pillai's Trace	.083	6.667	6.000	922.000	.000	40.000	.999
	Wilks' Lambda	.917	6.781	6.000	920.000	.000	40.688	1.000
	Hotelling's Trace	.090	6.896	6.000	918.000	.000	41.374	1.000
	Roy's Largest Root	.087	13.374	3.000	461.000	.000	40.122	1.000
AREA * MOTHER'S EDUCATION	Pillai's Trace	.037	.719	24.000	1386.000	.836	17.261	.642
	Wilks' Lambda	.964	.717	24.000	1334.741	.838	16.630	.619
	Hotelling's Trace	.037	.715	24.000	1376.000	.841	17.153	.638
	Roy's Largest Root	.017	.980	8.000	462.000	.451	7.838	.459

a Computed using alpha = .05

c The statistic is an upper bound on F that yields a lower bound on the significance level.

TABLE 58. MOTHER'S EDUCATION

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
AREA	NOUN-TITLES	333.232	4	83.308	2.345	.054	9.378	.679
	MODIFIERS	96.184	4	24.046	3.998	.003	15.994	.909
	VERBS	36.933	4	9.233	3.034	.017	12.137	.803
	ITEMS POOLED	481.848	4	120.462	2.164	.072	8.654	.639
MOTHER'S EDUCATION	NOUN-TITLES	1101.814	2	550.907	15.504	.000	31.008	.999
	MODIFIERS	96.201	2	48.100	7.998	.000	15.997	.955
	VERBS	1.479	2	.739	.243	.784	.486	.088
	ITEMS POOLED	1843.965	2	921.983	16.559	.000	33.118	1.000
AREA * MOTHER'S EDUCATION	NOUN-TITLES	199.325	8	24.916	.701	.691	5.610	.328
	MODIFIERS	38.919	8	4.865	.809	.595	6.472	.379
	VERBS	16.110	8	2.014	.662	.725	5.294	.309
	ITEMS POOLED	313.440	8	39.180	.704	.688	5.629	.329

TABLE 59. FACTOR ANALYSIS

Correlation Matrix

	Q2	Q3	Q5	Q6	Q7	Q9	Q10	Q11	Q12	Q14	Q15	Q16	Q17
Q2	1.000	-.009	.114	.482*	-.010	.063	-.008	-.007	.382*	.363*	.072	.274	.080
Q3	-.009	1.000	.072	-.014	.001	.275	-.004	.050	.000	-.022	.069	-.057	.069
Q5	.114	.072	1.000	.092	.230	.031	.108	.203	.040	.139	.225	.091	.172
Q6	.482*	-.014	.092	1.000	.001	.007	.016	-.071	.335*	.309	.041	.297	-.022
Q7	-.010	.001	.230	.001	1.000	.028	.215	.323	.019	.022	.281	.045	.188
Q9	.063	.275	.031	.007	.028	1.000	.063	.090	.066	-.039	.083	.041	.001
Q10	-.008	-.004	.108	.016	.215	.063	1.000	-.008	-.065	.042	.144	-.043	.065
Q11	-.007	.050	.203	-.071	.323*	.090	-.008	1.000	.011	.027	.261	.016	.063
Q12	.382*	.000	.040	.335*	.019	.066	-.065	.011	1.000	.402	-.028	.300*	.145
Q14	.363*	-.022	.139	.309	.022	-.039	.042	.027	.402	1.000	-.029	.392*	.082
Q15	.072	.069	.225	.041	.281	.083	.144	.261	-.028	-.029	1.000	.092	.051
Q16	.274	-.057	.091	.297	.045	.041	-.043	.016	.300*	.392	.092	1.000	.027
Q17	.080	.069	.172	-.022	.188	.001	.065	.063	.145	.082	.051	.027	1.000
Q19	.147	.021	.199	.191	.020	.053	-.036	.050	.205	.172	.089	.137	.106
Q20	-.096	.168	-.046	-.157	.029	.118	-.003	.083	-.072	-.099	.157	-.037	.041
Q21	.197	-.018	.080	.143	.049	.000	.010	.126	.218	.192	.146	.128	.121
Q23	.106	.047	.290	.088	.230	.078	.077	.128	.144	.187	.119	.131	.158
Q24	.014	.064	.252	.038	.309*	.029	.249	.220	.001	.062	.256	.098	.133
Q26	.111	.001	.196	.094	.210	.047	.073	.080	.098	.162	.201	.151	.214
Q28	.095	.030	.164	.064	.167	.106	.039	.168	-.012	-.016	.253	.052	.062
Q30	.125	.033	.223	.168	.111	-.007	-.003	.169	.172	.152	.199	.152	.099
Q31	.339*	.036	.075	.398	-.028	-.051	.003	-.046	.293	.324*	.006	.298	-.006
Q33	.370	-.063	.022	.313	.028	.075	-.014	-.001	.282	.221	.064	.259	.021
Q35	.002	.083	.214	.029	.223	.077	.098	.091	.044	.089	.188	.100	.227
Q36	.029	-.033	.194	.021	.306*	.042	.172	.273	-.052	.009	.236	.022	.143
Q37	.017	.104	-.003	.036	.066	.170	.073	.090	-.011	-.013	.051	.061	-.041
Q38	.001	.041	.123	.019	.121	.050	.201	.142	.025	.088	.101	.055	.187
Q40	.151	.017	.242	.136	.120	-.005	.076	.064	.120	.239	.184	.206	.111
Q42	.093	.081	.226	.101	.130	.085	.067	.034	.047	.037	.185	.080	.155
Q44	.034	.044	.138	.065	.156	.128	.122	.074	.030	.070	.089	.070	.160
Q45	.058	.003	.123	.106	.073	.067	.067	.066	.092	.069	.120	.080	.135
Q47	.151	-.047	.316	.112	.067	-.041	.057	.060	.164	.262	.117	.144	.155
Q48	.083	.077	.115	.055	.029	.058	.031	.075	.038	.118	.170	.084	.127
Q49	.018	.169	-.019	.043	-.040	.274	-.031	.063	.073	-.029	.011	-.012	-.002
Q50	.236	.023	.124	.294	.023	.030	-.070	.038	.310	.369*	.102	.369*	.105
Q51	-.039	.093	.154	-.008	.218	.060	.100	.105	-.022	-.036	.176	.044	.104
Q52	.027	.105	.257	.047	.194	.059	.072	.092	.044	.019	.185	.008	.074
Q55	.038	.247	-.059	.030	.046	.350*	-.020	-.002	.113	-.028	.092	.051	-.037
Q57	.120	.024	.322	.121	.256	.124	.091	.094	.146	.144	.194	.213	.159
Q59	.045	.088	.040	.059	.081	.242	.000	.020	.076	.009	.117	.048	.018
Q60	-.038	.163	-.019	-.009	-.025	.211	.026	.010	.040	-.011	.025	-.048	-.058
Q62	.240	-.006	.091	.119	.005	.003	-.065	.047	.234	.299	-.010	.251	.099
Q63	.034	.087	.244	.032	.232	-.012	.125	.209	.007	.007	.186	.039	.084
Q64	.050	.179	.043	.069	-.007	.263	.024	.068	.076	.015	.087	.037	.004
Q66	.070	.103	.141	.105	.077	.116	.015	.083	.070	.135	.132	.081	.200
Q67	.299	-.043	.071	.358*	-.013	.014	-.028	.034	.302*	.334*	.066	.334*	.050
Q68	.040	.082	.167	.069	.186	.103	.053	.151	.076	.070	.213	.092	.109
Q69	.017	-.025	.090	.106	.109	.065	.034	.157	.082	.084	.145	.106	.126
Q70	-.092	.179	.079	-.053	.084	.210	.044	.048	.021	-.069	.014	.014	.007
Q71	.025	.038	.200	.003	.271	.055	.153	.145	.019	-.003	.197	-.025	.110

	Q19	Q20	Q21	Q23	Q24	Q26	Q28	Q30	Q31	Q33	Q35	Q36	Q37
Q2	.147	-.096	.197	.106	.014	.111	.095	.125	.339*	.370*	.002	.029	.017
Q3	.021	.168	-.018	.047	.064	.001	.030	.033	.036	-.063	.083	-.033	.104
Q5	.199	-.046	.080	.290	.252	.196	.164	.223	.075	.022	.214	.194	-.003
Q6	.191	-.157	.143	.088	.038	.094	.064	.168	.398*	.313	.029	.021	.036
Q7	.020	.029	.049	.230	.309*	.210	.167	.111	-.028	.028	.223	.306	.066
Q9	.053	.118	.000	.078	.029	.047	.106	-.007	-.051	.075	.077	.042	.170
Q10	-.036	-.003	.010	.077	.249	.073	.039	-.003	.003	-.014	.098	.172	.073
Q11	.050	.083	.126	.128	.220	.080	.168	.169	-.046	-.001	.091	.273	.090
Q12	.205	-.072	.218	.144	.001	.098	-.012	.172	.293	.282	.044	-.052	-.011
Q14	.172	-.099	.192	.187	.062	.162	-.016	.152	.324	.221	.089	.009	-.013
Q15	.089	.157	.146	.119	.256	.201	.253	.199	.006	.064	.188	.236	.051
Q16	.137	-.037	.128	.131	.098	.151	.052	.152	.298	.259	.100	.022	.061
Q17	.106	.041	.121	.158	.133	.214	.062	.099	-.006	.021	.227	.143	-.041
Q19	1.000	-.058	.311*	.146	.067	.192	.113	.188	.092	.139	.104	.023	-.008
Q20	-.058	1.000	.003	-.010	.020	.019	.047	-.051	-.081	-.035	.034	.128	.013
Q21	.311	.003	1.000	.084	.018	.162	.086	.211	.073	.239	.030	-.054	-.070
Q23	.146	-.010	.084	1.000	.061	.404*	.102	.273	.090	.116	.335*	.076	.019
Q24	.067	.020	.018	.061	1.000	.135	.104	.099	-.010	.040	.090	.337*	.026
Q26	.192	.019	.162	.404*	.135	1.000	.193	.362	.076	.061	.304*	.049	-.015
Q28	.113	.047	.086	.102	.104	.193	1.000	.212	.015	-.021	.309*	.145	.156
Q30	.188	-.051	.211	.273	.099	.362*	.212	1.000	.104	.106	.170	.053	.020
Q31	.092	-.081	.073	.090	-.010	.076	.015	.104	1.000	.263	.024	.060	.028
Q33	.139	-.035	.239	.116	.040	.061	-.021	.106	.263	1.000	.004	.054	.088
Q35	.104	.034	.030	.335*	.090	.304	.309*	.170	.024	.004	1.000	-.059	.124
Q36	.023	.128	-.054	.076	.337*	.049	145	.053	.060	.054	-.059	1.000	.009
Q37	-.008	.013	-.070	.019	.026	-.015	.156	.020	.028	.088	.124	.009	1.000
Q38	.102	.072	.081	.168	.222	.241	.222	.085	-.014	-.028	.078	.264	.064
Q40	.150	-.087	.181	.244	.176	.281	.180	.261	.205	.089	.178	.075	.025
Q42	.225	-.088	.101	.190	.124	.350*	.271	.164	.037	.036	.384	.029	.143
Q44	.110	.039	.000	.140	.107	.123	.041	.108	.036	.112	.122	.131	.006
Q45	.112	-.056	.049	.129	.155	.254	.145	.105	.085	.028	.196	.085	.057
Q47	.195	-.053	.068	.285	.067	.269	.106	.206	.087	.125	.226	.021	.026
Q48	.096	.016	.062	.145	.093	.320	.087	.168	.067	.053	.216	-.014	.020
Q49	-.008	.048	.040	-.020	.035	-.078	.084	.046	-.002	.087	.050	.050	.247
Q50	.150	-.078	.225	.124	.042	.151	.033	.172	.275	.290	.094	.029	.007
Q51	.063	.050	.025	.107	.214	.207	.262	.069	.006	-.073	.300	.145	.141
Q52	.111	-.034	.049	.176	.067	.176	.282	.210	.061	-.026	.239	.077	.009
Q55	.066	.054	.081	-.014	.005	.137	.035	.018	.010	.038	.119	.079	.139
Q57	.131	-.005	.014	.333*	.143	.323*	.157	.276	.109	.123	.284	.155	.076
Q59	.076	.076	.045	-.001	.011	.069	.099	.053	-.025	.035	.082	.102	.103
Q60	.065	.024	.062	.041	.036	.049	.053	-.030	-.075	.070	.075	-.025	.057
Q62	.156	-.074	.201	.174	.041	.166	.069	.152	.216	.168	-.009	-.020	-.048
Q63	.114	-.037	.128	.212	.210	.164	.248	.206	-.013	.055	.203	.199	.011
Q64	.086	.104	.131	.033	.018	.071	.106	.021	.050	.099	.113	.032	.093
Q66	.175	-.004	.094	.148	.144	.236	.059	.194	.073	.145	.208	.085	.037
Q67	.110	-.050	.190	.096	.005	.061	-.003	.047	.352*	.306	.018	.050	.005
Q68	.113	.005	.140	.202	.162	.318	.197	.149	.112	.009	.260	.155	.015
Q69	.115	.073	.107	.117	.161	.164	.192	.133	.086	.016	.223	.117	.027
Q70	-.009	.006	-.032	.035	.023	-.021	.068	-.023	-.070	-.082	.058	.038	.090
Q71	.119	-.021	-.059	.226	.223	.183	.200	.119	-.019	-.026	.261	.190	.072

	Q38	Q40	Q42	Q44	Q45	Q47	Q48	Q49	Q50	Q51	Q52	Q55	Q57
Q2	.001	.151	.093	.034	.058	.151	.083	.018	.236	-.039	.027	.038	.120
Q3	.041	.017	.081	.044	.003	-.047	.077	.169	.023	.093	.105	.247	.024
Q5	.123	.242	.226	.138	.123	.316*	.115	-.019	.124	.154	.257	-.059	.322
Q6	.019	.136	.101	.065	.106	.112	.055	.043	.294	-.008	.047	.030	.121
Q7	.121	.120	.130	.156	.073	.067	.029	-.040	.023	.218	.194	.046	.256
Q9	.050	-.005	.085	.128	.067	-.041	.058	.274	.030	.060	.059	.350*	.124
Q10	.201	.076	.067	.122	.067	.057	.031	-.031	-.070	.100	.072	-.020	.091
Q11	.142	.064	.034	.074	.066	.060	.075	.063	.038	.105	.092	-.002	.094
Q12	.025	.120	.047	.030	.092	.164	.038	.073	.310	-.022	.044	.113	.146
Q14	.088	.239	.037	.070	.069	.262	.118	-.029	.369*	-.036	.019	-.028	.144
Q15	.101	.184	.185	.089	.120	.117	.170	.011	.102	.176	.185	.092	.194
Q16	.055	.206	.080	.070	.080	.144	.084	-.012	.369*	.044	.008	.051	.213
Q17	.187	.111	.155	.160	.135	.155	.127	-.002	.105	.104	.074	-.037	.159
Q19	.102	.150	.225	.110	.112	.195	.096	-.008	.150	.063	.111	.066	.131
Q20	.072	-.087	-.088	.039	-.056	-.053	.016	.048	-.078	.050	-.034	.054	-.005
Q21	.081	.181	.101	.000	.049	.068	.062	.040	.225	.025	.049	.081	.014
Q23	.168	.244	.190	.140	.129	.285	.145	-.020	.124	.107	.176	-.014	.333*
Q24	.222	.176	.124	.107	.155	.067	.093	.035	.042	.214	.067	.005	.143
Q26	.241	.281	.350*	.123	.254	.269	.320*	-.078	.151	.207	.176	.137	.323*
Q28	.222	.180	.271	.041	.145	.108	.087	.084	.033	.262	.282	.035	.157
Q30	.085	.261	.164	.108	.105	.206	.168	.046	.172	.069	.210	.018	.276
Q31	-.014	.205	.037	.036	.085	.087	.067	-.002	.275	.006	.061	.010	.109
Q33	-.028	.089	.036	.112	.028	.125	.053	.087	.290	-.073	-.026	.038	.123
Q35	.078	.178	.384*	.122	.196	.226	.216	.050	.094	.300	.239	.119	.284
Q36	.264	.075	.029	.131	.085	.021	-.014	.050	.029	.145	.077	.079	.155
Q37	.064	.025	.143	.006	.057	.026	.020	.247	.007	.141	.009	.139	.076
Q38	1.000	.056	.272	.053	.226	.076	.101	.010	.077	.210	.171	.075	.155
Q40	.056	1.000	.173	.176	.159	.211	.223	.047	.175	.103	.165	.002	.232
Q42	.272	.173	1.000	.110	.287	.207	.254	.049	.066	.360*	.289	.138	.223
Q44	.053	.176	.110	1.000	.172	.085	.026	.096	.075	.101	.085	.079	.182
Q45	.226	.159	.287	.172	1.000	.080	.202	.026	.103	.206	.139	.080	.065
Q47	.076	.211	.207	.085	.080	1.000	.261	-.004	.180	.132	.164	.007	.299
Q48	.101	.223	.254	.026	.202	.261	1.000	.022	.163	.165	.098	.084	.191
Q49	.010	.047	.049	.096	.026	-.004	.022	1.000	.002	.049	.033	.215	-.061
Q50	.077	.175	.066	.075	.103	.180	.163	.002	1.000	.024	.078	.090	.166
Q51	.210	.103	.360	.101	.206	.132	.165	.049	.024	1.000	.130	.208	.241
Q52	.171	.165	.289	.085	.139	.164	.098	.033	.078	.130	1.000	.021	.258
Q55	.075	.002	.138	.079	.080	.007	.084	.215	.090	.208	.021	1.000	.059
Q57	.155	.232	.223	.182	.065	.299	.191	-.061	.166	.241	.258	.059	1.000
Q59	.028	.002	.096	.071	.049	-.008	.016	.364*	.015	.137	.107	.343*	.062
Q60	.012	.018	.117	.040	.075	-.042	.013	.243	-.036	.150	.014	.289	.007
Q62	.059	.148	.031	-.014	-.008	.118	.074	-.023	.208	-.070	.056	.016	.150
Q63	.209	.176	.225	.096	.139	.137	.146	.041	.057	.238	.249	.095	.149
Q64	.128	.050	.135	.119	.086	.014	.063	.172	.140	.103	.031	.359*	.009
Q66	.118	.282	.212	.120	.153	.191	.266	.093	.216	.141	.152	.133	.157
Q67	.011	.098	.041	.039	.006	.096	.010	.032	.393*	-.023	.001	.062	.148
Q68	.189	.154	.309	.155	.261	.119	.125	-.016	.130	.313*	.220	.137	.194
Q69	.181	.110	.159	.131	.173	.092	.174	.026	.093	.153	.098	.100	.122
Q70	.033	.023	.095	.040	-.069	-.041	.010	.227	.027	.143	.058	.263	.091
Q71	.190	.161	.266	.112	.166	.134	.140	-.019	.082	.297	.249	.070	.255

	Q59	Q60	Q62	Q63	Q64	Q66	Q67	Q68	Q69	Q70	Q71
Q2	.045	-.038	.240	.034	.050	.070	.299	.040	.017	-.092	.025
Q3	.088	.163	-.006	.087	.179	.103	-.043	.082	-.025	.179	.038
Q5	.040	-.019	.091	.244	.043	.141	.071	.167	.090	.079	.200
Q6	.059	-.009	.119	.032	.069	.105	.358	.069	.106	-.053	.003
Q7	.081	-.025	.005	.232	-.007	.077	-.013	.186	.109	.084	.271
Q9	.242	.211	.003	-.012	.263	.116	.014	.103	.065	.210	.055
Q10	.000	.026	-.065	.125	.024	.015	-.028	.053	.034	.044	.153
Q11	.020	.010	.047	.209	.068	.083	.034	.151	.157	.048	.145
Q12	.076	.040	.234	.007	.076	.070	.302*	.076	.082	.021	.019
Q14	.009	-.011	.299	.007	.015	.135	.334*	.070	.084	-.069	-.003
Q15	.117	.025	-.010	.186	.087	.132	.066	.213	.145	.014	.197
Q16	.048	-.048	.251	.039	.037	.081	.334*	.092	.106	.014	-.025
Q17	.018	-.058	.099	.084	.004	.200	.050	.109	.126	.007	.110
Q19	.076	.065	.156	.114	.086	.175	.110	.113	.115	-.009	.119
Q20	.076	.024	-.074	-.037	.104	-.004	-.050	.005	.073	.006	-.021
Q21	.045	.062	.201	.128	.131	.094	.190	.140	.107	-.032	-.059
Q23	-.001	.041	.174	.212	.033	.148	.096	.202	.117	.035	.226
Q24	.011	.036	.041	.210	.018	.144	.005	.162	.161	.023	.223
Q26	.069	.049	.166	.164	.071	.236	.061	.318	.164	-.021	.183
Q28	.099	.053	.069	.248	.106	.059	-.003	.197	.192	.068	.200
Q30	.053	-.030	.152	.206	.021	.194	.047	.149	.133	-.023	.119
Q31	-.025	-.075	.216	-.013	.050	.073	.352	.112	.086	-.070	-.019
Q33	.035	.070	.168	.055	.099	.145	.306	.009	.016	-.082	-.026
Q35	.082	.075	-.009	.203	.113	.208	.018	.260	.223	.058	.261
Q36	.102	-.025	-.020	.199	.032	.085	.050	.155	.117	.038	.190
Q37	.103	.057	-.048	.011	.093	.037	.005	.015	.027	.090	.072
Q38	.028	.012	.059	.209	.128	.118	.011	.189	.181	.033	.190
Q40	.002	.018	.148	.176	.050	.282	.098	.154	.110	.023	.161
Q42	.096	.117	.031	.225	.135	.212	.041	.309*	.159	.095	.266
Q44	.071	.040	-.014	.096	.119	.120	.039	.155	.131	.040	.112
Q45	.049	.075	-.008	.139	.086	.153	.006	.261	.173	-.069	.166
Q47	-.008	-.042	.118	.137	.014	.191	.096	.119	.092	-.041	.134
Q48	.016	.013	.074	.146	.063	.266	.010	.125	.174	.010	.140
Q49	.364*	.243	-.023	.041	.172	.093	.032	-.016	.026	.227	-.019
Q50	.015	-.036	.208	.057	.140	.216	.393*	.130	.093	.027	.082
Q51	.137	.150	-.070	.238	.103	.141	-.023	.313	.153	.143	.297
Q52	.107	.014	.056	.249	.031	.152	.001	.220	.098	.058	.249
Q55	.343*	.289	.016	.095	.359*	.133	.062	.137	.100	.263	.070
Q57	.062	.007	.150	.149	.009	.157	.148	.194	.122	.091	.255
Q59	1.000	.316*	-.013	.086	.226	.018	.105	.102	-.016	.281	.115
Q60	.316*	1.000	-.006	.079	.260	-.022	.066	.054	.029	.209	.007
Q62	-.013	-.006	1.000	.001	.064	.094	.246	.150	.044	-.039	.041
Q63	.086	.079	.001	1.000	.071	.265	.042	.227	.113	.050	.211
Q64	.226	.260	.064	.071	1.000	.084	.147	.080	.091	.193	.038
Q66	.018	-.022	.094	.265	.084	1.000	.119	.144	.222	.031	.143
Q67	.105	.066	.246	.042	.147	.119	1.000	.085	.121	-.006	.027
Q68	.102	.054	.150	.227	.080	.144	.085	1.000	.143	-.018	.276
Q69	-.016	.029	.044	.113	.091	.222	.121	.143	1.000	-.068	.040
Q70	.281	.209	-.039	.050	.193	.031	-.006	-.018	-.068	1.000	.110
Q71	.115	.007	.041	.211	.038	.143	.027	.276	.040	.110	1.000

TABLE 60. FACTOR ANALYSIS

Rotated Component Matrix

	Component			
	1	2	3	4
#2	.651*	-.005	.069	-.060
#3	-.039	-.027	-.030	.299
#5	.076	.056	.439*	-.052
#6	.683*	.103	-.024	-.039
#7	-.024	.136	.361*	.030
#9	.025	-.027	.062	.490*
#10	-.038	.044	.123	.015
#11	-.070	-.001	.081	.003

#12	.569*	-.021	.121	.110
#14	.576*	-.076	.187	-.042
#15	.046	.178	.201	.045
#16	.584*	.037	.169	.030
#17	.017	.090	.221	-.072
#19	.172	.124	.128	.076
#20	-.118	-.062	.013	.067
#21	.199	.005	-.009	.107
#23	.071	.093	.637*	.008
#24	.022	.093	.004	.014
#26	.032	.346*	.477*	.050
#28	-.007	.474*	.132	-.031
#30	.081	.046	.373	-.064
#31	.657*	.087	-.036	-.110
#33	.550*	-.150	.073	.065
#35	-.007	.462*	.490*	.067
#36	.071	.069	-.058	.017
#37	.064	.110	.058	.127
#38	-.013	.408*	-.062	.001
#40	.160	.029	.283	-.015
#42	.030	.630*	.218	.117
#44	.061	.021	.195	.121
#45	.054	.505*	-.078	.004
#47	.165	.049	.528*	-.081
#48	.035	.187	.213	.020
#49	.001	-.136	-.098	.460*
#50	.583*	.051	.075	.073
#51	-.039	.587*	.145	.228
#52	.000	.354*	.259	-.038
#55	.075	.175	-.057	.678*
#57	.198	.159	.648*	.044
#59	.048	.070	.067	.645*
#60	-.071	.067	-.008	.641*
#62	.330*	-.040	.146	.011
#63	-.035	.266	.081	.069
#64	.120	.118	-.086	.527
#66	.119	.096	.058	.046
#67	.670*	.023	.001	.129
#68	.091	.559*	.123	.106
#69	.098	.311	-.044	-.069
#70	-.079	-.058	.138	.575*
#71	.000	.405*	.294	.091

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 56 iterations.

TABLE 61. POSITION OF REFERENCE
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NOUN-TITLES REFERENCE PRECEDING	.5357	479	.2166	.009899
	NOUN-TITLES REFERENCE FOLLOWING	.5384	479	.2308	.01055
Pair 2	MODIFIERS REFERENCE PRECEDING	.2792	480	.2490	.01137
	MODIFIERS REFERENCE FOLLOWING	.2271	480	.2987	.01364
Pair 3	VERBS REFERENCE PRECEDING	.8820	481	.1949	.008889
	VERBS REFERENCE FOLLOWING	.8416	481	.2062	.009402
Pair 4	ITEMS POOLED REFERENCE PRECEDING	.5314	478	.1749	.007998
	ITEMS POOLED REFERENCE FOLLOWING	.5711	478	.1630	.007454

TABLE 62. PROXIMITY OF GENDER REFERENCE

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NOUN-TITLES WITH REFERENCE ADJOINING AND PRECEDING	.5266	480	.2394	.0109
	NOUN-TITLES WITH REFERENCE ADJOINING AND FOLLOWING	.5458	480	.2941	.0134
Pair 2	NOUN-TITLES WITH REFERENCE SEPERATED AND PRECEDING	.5233	480	.2218	.0101
	NOUN-TITLES WITH REFERENCE SEPERATED AND FOLLOWING	.6215	480	.3239	.0148
Pair 3	MODIFIERS WITH REFERENCE ADJOINING AND PRECEDING	.2319	480	.2991	.0137
	MODIFIERS WITH REFERENCE ADJOINING AND FOLLOWING	.2250	480	.3364	.0154
Pair 4	MODIFIERS WITH REFERENCE SEPERATED AND PRECEDING	.2176	481	.2938	.0134
	MODIFIERS WITH REFERENCE SEPERATED AND FOLLOWING	.2297	481	.3396	.0155
Pair 5	VERBS WITH REFERENCE ADJOINING AND PRECEDING	.9231	481	.1863	.0085
	VERBS WITH REFERENCE ADJOINING AND FOLLOWING	.8836	481	.2126	.0097
Pair 6	VERBS WITH REFERENCE SEPARATED AND PRECEDING	.8410	481	.2908	.0133
	VERBS WITH REFERENCE SEPARATED AND FOLLOWING	.7997	481	.2606	.0119
Pair 7	ITEMS POOLED WITH REFERENCE ADJOINING AND PRECEDING	.4665	479	.1571	.0072
	ITEMS POOLED WITH REFERENCE ADJOINING AND FOLLOWING	.4937	479	.2045	.0093
Pair 8	ITEMS POOLED WITH REFERENCE SEPARATED AND PRECEDING	.4943	480	.1906	.0087
	ITEMS POOLED WITH REFERENCE SEPARATED AND FOLLOWING	.6880	480	.1972	.0090

TABLE 63. INFLUENCE OF PRETERIT VERB

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NOUN-TITLES WITH PRETERIT VERBS	.4940	479	.2295	.01049
	NOUN-TITLES WITHOUT PRETERIT VERBS	.5518	479	.2222	.01015
Pair 2	MODIFIERS WITH PRETERIT VERBS	.2328	480	.2945	.01344
	MODIFIERS WITHOUT PRETERIT VERBS	.2212	480	.2657	.01213

TABLE 64. TRUE NOUNS VS. SUBSTANTIVIZED

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
TRUE NOUNS	.5361	479	.2184	.009981
SUBSTANTIVIZED	.5386	479	.2659	.01215

TABLE 65. PRESENCE OF DECLIANBLE SPECIFIER

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
SENTENCES WITH SPECIFIERS	.4990	479	.2692	.0123
SENTENCES WITHOUT SPECIFIRS	.5439	479	.2157	.009855

TABLE 66. DOUBLE REFERENCE VS. SINGLE REFERENCE TO GENDER

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
DOUBLE REFERENCE	.5112	478	.1711	.007828
NO DOUBLE REFERENCE	.5693	478	.1586	.007252

TABLE 67. STUDY AREAS

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
AREA	Pillai's Trace	.108	4.428	120.000	1419.000	.000
	Wilks' Lambda	.894	4.504	120.000	1246.440	.000
	Hotelling's Trace	.117	4.562	120.000	1409.000	.000
	Roy's Largest Root	.093	11.029	40.000	473.000	.000

a Exact statistic

b The statistic is an upper bound on F that yields a lower bound on the significance level.

c Design: Intercept+AREA

TABLE 68. ITEMS BY STUDY AREA FACTOR

Tests of Between-Subjects Effects

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power
#3	1.482	4	.371	3.907	.004	15.629	.901
#6	2.503	4	.626	3.578	.007	14.311	.871
#7	2.429	4	.607	2.807	.025	11.228	.767
#9	2.217	4	.554	3.491	.008	13.962	.862
#14	2.560	4	.640	4.333	.002	17.333	.931
#15	2.091	4	.523	2.646	.033	10.583	.739
#16	2.305	4	.576	3.888	.004	15.551	.900
#21	2.826	4	.706	2.871	.023	11.485	.778
#24	3.554	4	.888	4.482	.001	17.929	.940
#28	3.339	4	.835	3.771	.005	15.084	.890
#33	4.946	4	1.237	6.887	.000	27.549	.994
#36	1.835	4	.459	2.586	.036	10.342	.728
#38	3.773	4	.943	4.002	.003	16.007	.909
#42	3.613	4	.903	3.736	.005	14.943	.886
#50	1.926	4	.482	2.847	.024	11.387	.774
#57	3.911	4	.978	4.620	.001	18.479	.947
#60	.831	4	.208	2.461	.045	9.842	.703
#67	5.232	4	1.308	8.065	.000	32.261	.998
#71	2.704	4	.676	2.877	.022	11.508	.779

TABLE 69. ITEMS BY STUDY AREA FACTOR

Multiple Comparisons

Bonferroni

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AREA	(J) AREA				Lower Bound	Upper Bound
NOUN-TITLES							
#3	Siberia	Belarus	-.1519	4.580E-02	.010	-.2811	-2.2759E-02
		Canada	-.1402	4.468E-02	.018	-.2662	-1.4166E-02
#7	Siberia	Canada	.1978	6.747E-02	.035	7.467E-03	.3880
#15	Siberia	Canada	.2050	6.449E-02	.016	2.315E-02	.3869
#21	Siberia	Russia	.2375	7.662E-02	.021	2.140E-02	.4536
#24	Siberia	Belarus	.2087	6.621E-02	.017	2.193E-02	.3954
		Canada	.2215	6.459E-02	.007	3.932E-02	.4036
#28	Siberia	Russia	-.2136	7.268E-02	.034	-.4186	-8.6564E-03
		Moldova	-.2053	7.249E-02	.048	-.4098	-9.0625E-04
#38	Canada	Russia	-.2287	6.851E-02	.009	-.4219	-3.5523E-02
		Moldova	-.1982	6.829E-02	.039	-.3908	-5.6280E-03
#42	Canada	Belarus	-.2190	6.627E-02	.010	-.4059	-3.2127E-02
#57	Moldova	Belarus	.1978	6.643E-02	.031	1.046E-02	.3852
		Canada	.2160	6.471E-02	.009	3.348E-02	.3985
	Canada	Russia	-.1982	6.492E-02	.024	-.3813	-1.5147E-02
#71	Canada	Russia	-.2059	6.840E-02	.027	-.3988	-1.3004E-02
MODIFIERS							
#6	Siberia	Canada	.2218	6.067E-02	.003	5.069E-02	.3929
#14	Siberia	Belarus	.1808	5.716E-02	.017	1.958E-02	.3420
		Canada	.2139	5.576E-02	.001	5.664E-02	.3711
#16	Siberia	Belarus	.1750	5.726E-02	.024	1.351E-02	.3365
		Canada	.1803	5.586E-02	.013	2.280E-02	.3379

#33	Siberia	Belarus	.2317	6.301E-02	.003	5.401E-02	.4094
		Russia	.2011	6.546E-02	.022	1.653E-02	.3857
		Moldova	.2603	6.528E-02	.001	7.614E-02	.4444
		Canada	.3087	6.147E-02	.000	.1353	.4820
#50	Siberia	Canada	.1843	5.967E-02	.021	1.602E-02	.3526
#67	Siberia	Belarus	.2135	5.989E-02	.004	4.457E-02	.3824
		Russia	.2091	6.221E-02	.008	3.365E-02	.3845
		Moldova	.2115	6.204E-02	.007	3.654E-02	.3865
		Canada	.3310	5.842E-02	.000	.1662	.4957
VERBS							
#3	Siberia	Belarus	-.1535	5.989E-02	.004	.0445	.3824
		Canada	-.1410	5.842E-02	.000	.1662	.4957
#9	Russia	Belarus	-.1853	5.771E-02	.014	-.3481	-2.2547E-02
		Moldova	-.1835	5.990E-02	.023	-.3524	-1.4540E-02

Based on observed means.
The mean difference is significant at the .05 level.

TABLE 70. ITEMS BY AGE FACTOR

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
AGE	Pillai's Trace	.767	2.935	150.000	1281.000	.000
	Wilks' Lambda	.369	3.357	150.000	1274.801	.000
	Hotelling's Trace	1.364	3.852	150.000	1271.000	.000
	Roy's Largest Root	1.076	9.187	50.000	427.000	.000

a Exact statistic
b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+AGE

TABLE 71. ITEMS BY AGE FACTOR

Tests of Between-Subjects Effects

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
#5	24.022	3	8.007	51.793	.000
#7	15.800	3	5.267	28.069	.000
#10	7.468	3	2.489	13.466	.000
#11	10.825	3	3.608	18.352	.000
#12	1.414	3	.471	2.683	.046
#15	3.843	3	1.281	6.621	.000
#17	2.178	3	.726	3.011	.030
#23	9.942	3	3.314	15.434	.000
#24	7.910	3	2.637	13.980	.000
#26	7.022	3	2.341	10.451	.000
#28	4.401	3	1.467	6.709	.000
#30	3.180	3	1.060	4.882	.002
#33	2.510	3	.837	4.540	.004
#35	8.280	3	2.760	11.939	.000
#36	7.868	3	2.623	15.961	.000
#38	3.133	3	1.044	4.415	.004
#40	7.677	3	2.559	11.101	.000
#42	4.092	3	1.364	5.677	.001
#44	2.051	3	.684	2.991	.031
#47	4.701	3	1.567	9.834	.000
#48	2.556	3	.852	3.691	.012
#51	7.891	3	2.630	12.651	.000
#52	12.230	3	4.077	19.800	.000
#57	10.471	3	3.490	17.684	.000
#63	7.582	3	2.527	10.899	.000
#66	3.500	3	1.167	4.809	.003
#68	3.191	3	1.064	4.574	.004
#69	2.349	3	.783	3.299	.020
#71	9.794	3	3.265	14.872	.000

TABLE 72. ITEMS BY AGE FACTOR
Multiple Comparisons
Bonferroni

			Mean Difference (J-I)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) AGE	(J) AGE				Lower Bound	Upper Bound
NOUN-TITLES							
#5	1.00	3.00	-.2436	5.013	.000	-.3764	-.1108
		4.00	-.5267	4.858	.000	-.6554	-.3980
	2.00	4.00	-.5407	5.221	.000	-.6790	-.4024
	3.00	2.00	.2576	5.366	.000	.1154	.3997
		4.00	-.2831	5.013	.000	-.4159	-.1503
#7	1.00	3.00	-.3112	5.523	.000	-.4575	-.1649
		4.00	-.4275	5.352	.000	-.5693	-.2857
	2.00	3.00	-.2645	5.911	.000	-.4211	-.1079
		4.00	-.3808	5.752	.000	-.5332	-.2284
#10	1.00	3.00	-.2693	5.482	.000	-.4146	-.1241
		4.00	-.3053	5.313	.000	-.4461	-.1646
	2.00	4.00	-.1750	5.710	.014	-.3262	-2.3692
#11	1.00	3.00	-.3573	5.653	.000	-.5070	-.2075
		4.00	-.2977	5.479	.000	-.4429	-.1526
	2.00	3.00	-.2834	6.051	.000	-.4438	-.1231
		4.00	-.2239	5.888	.001	-.3799	-6.7889
#15	1.00	3.00	-.1489	5.608	.049	-.2975	-3.4931
		4.00	-.2214	5.435	.000	-.3654	-7.7385
	2.00	4.00	-.1797	5.841	.013	-.3344	-2.4948
#17	1.00	4.00	-.1527	6.068	.073	-.3134	8.081
	2.00	4.00	-.1670	6.521	.064	-.3398	5.740
#23	1.00	4.00	-.3053	5.725	.000	-.4570	-.1537
	2.00	3.00	-.1966	6.323	.012	-.3641	-2.9030
		4.00	-.3802	6.153	.000	-.5432	-.2171
	3.00	4.00	-.1836	5.908	.012	-.3401	-2.7086
#24	1.00	3.00	-.2262	5.537	.000	-.3729	-7.9555
		4.00	-.3282	5.366	.000	-.4704	-.1861
	2	4.00	-.2279	5.767	.001	-.3806	-7.5077
#26	1	4.00	-.1832	5.847	.011	-.3381	-2.8291
	2	3.00	-.1793	6.458	.034	-.3504	-8.2250
		4.00	-.3496	6.284	.000	-.5161	-.1831
	3	4.00	-.1703	6.033	.030	-.3302	-1.0463
#28	1.00	4.00	-.1985	5.778	.004	-.3515	-4.5398
	2.00	3.00	-.1755	6.381	.037	-.3446	-6.4644
		4.00	-.2310	6.209	.001	-.3955	-6.6481
#30	1.00	4.00	-.1679	5.758	.022	-.3205	-1.5391
	2.00	4.00	-.2127	6.188	.004	-.3767	-4.8803
#35	1.00	4.00	-.3206	5.941	.000	-.4780	-.1632
	2.00	4.00	-.3057	6.385	.000	-.4749	-.1366
	3.00	4.00	-.1868	6.130	.015	-.3492	-2.4353
	1.00	3.00	-.2676	5.168	.000	-.4046	-.1307
		4.00	-.2977	5.009	.000	-.4304	-.1650
	2.00	3.00	-.1907	5.532	.004	-.3372	-4.4138
		4.00	-.2208	5.383	.000	-.3634	-7.8149
#38	1.00	4.00	-.1756	6.010	.022	-.3348	-1.6353
#40	1.00	4.00	-.3130	5.932	.000	-.4701	-.1558
	2.00	4.00	-.2883	6.375	.000	-.4572	-.1194
	3.00	4.00	-.1873	6.121	.014	-.3495	-2.5116
#42	1.00	4.00	-.2366	6.056	.001	-.3971	-7.6182
	2.00	4.00	-.1947	6.509	.018	-.3671	-2.2210
	3.00	1.00	.1023	6.249	.613	-6.3235	.2679
#47	1.00	3.00	-.1594	5.089	.011	-.2942	-2.4547
		4.00	-.2443	4.932	.000	-.3750	-.1136
	2.00	4.00	-.2035	5.301	.001	-.3440	-6.3070
#48	3.00	4.00	-.1878	6.125	.014	-.3501	-2.5530
#51	1.00	3.00	-.2969	5.813	.000	-.4509	-.1429
		4.00	-.2824	5.634	.000	-.4317	-.1332

		2.00	3.00	-.2031	6.222	.007	-.3680	-3.8254
			4.00	-.1886	6.055	.012	-.3490	-2.8206
	#52	1.00	3.00	-.1829	5.785	.010	-.3361	-2.9608
			4.00	-.3969	5.607	.000	-.5455	-.2484
		2.00	4.00	-.3579	6.026	.000	-.5175	-.1982
		3.00	4.00	-.2141	5.785	.001	-.3673	-6.0800
	#57	1.00	3.00	-.2094	5.664	.001	-.3595	-5.9334
			4.00	-.3740	5.489	.000	-.5195	-.2286
		2.00	4.00	-.3067	5.900	.000	-.4630	-.1504
		3.00	4.00	-.1646	5.664	.023	-.3147	-1.4585
	#63	1.00	3.00	-.1856	6.139	.016	-.3482	-2.2926
			4.00	-.2977	5.950	.000	-.4553	-.1401
		2.00	4.00	-.2828	6.394	.000	-.4522	-.1134
		3.00	1.00	.1856	6.139	.016	2.293	.3482
	#66	2.00	4.00	-.2273	6.540	.003	-.4005	-5.3971
	#68	1.00	4.00	-.1985	5.958	.006	-.3563	-4.0624
	#69	2.00	4.00	-.1970	6.470	.015	-.3684	-2.5604
	#71	1.00	2.00	-.1754	6.222	.030	-.3403	-1.0587
			3.00	-.2678	5.973	.000	-.4261	-.1096
			4.00	-.3740	5.789	.000	-.5274	-.2207
		2.00	1.00	.1754	6.222	.030	1.059	.3403
			4.00	-.1986	6.222	.009	-.3635	-3.3793
MODIFIERS								
	#12	1.00	3.00	.1512	5.344	.029	9.583	.2927
	#33	1.00	3.00	.1864	5.473	.004	4.135	.3314
			4.00	.1527	5.305	.025	1.213	.2932

Based on observed means.
The mean difference is significant at the .05 level.

TABLE 73. ITEMS BY EDUCATION FACTOR

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
EDUCATION	Pillai's Trace	.633	3.950	100.000	854.000	.000
	Wilks' Lambda	.444	4.269	100.000	852.000	.000
	Hotelling's Trace	1.081	4.596	100.000	850.000	.000
	Roy's Largest Root	.888	7.580	50.000	427.000	.000

a Exact statistic
b The statistic is an upper bound on F that yields a lower bound on the significance level.

TABLE 74. ITEMS BY EDUCATION FACTOR

Tests of Between-Subjects Effects

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
#2	18.992	2	9.496	66.002	.000
#6	12.621	2	6.311	41.287	.000
#7	1.738	2	.869	4.007	.019
#10	1.664	2	.832	4.229	.015
#12	10.975	2	5.488	35.364	.000
#14	10.060	2	5.030	38.310	.000
#16	10.641	2	5.321	40.903	.000
#17	3.406	2	1.703	7.153	.001
#19	1.876	2	.938	4.393	.013
#21	3.309	2	1.654	6.781	.001
#26	3.469	2	1.734	7.509	.001
#28	1.904	2	.952	4.260	.015
#30	2.296	2	1.148	5.252	.006
#31	10.937	2	5.469	37.178	.000
#33	9.746	2	4.873	28.888	.000
#40	1.737	2	.869	3.581	.029
#47	1.147	2	.574	3.446	.033
#50	3.511	2	1.755	10.632	.000
#57	1.631	2	.815	3.783	.023
#62	18.834	2	9.417	57.643	.000
#67	7.495	2	3.747	23.912	.000
#71	3.172	2	1.586	6.808	.001

TABLE 75. ITEMS BY EDUCATION FACTOR

Multiple Comparisons
Bonferroni

			Mean Difference (J-I)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) EDUCATION	(J) EDUCATION				Lower Bound	Upper Bound
NOUN-TITLES							
#7	high school	technical school	-.1662	6.602	.036	-.3248	-7.5733
		university	-.1246	5.100	.045	-.2472	-2.0989
#10	high school	technical school	-.1515	6.288	.049	-.3025	-4.1190
		university	-.1296	4.858	.024	-.2463	-1.2873
#17	technical school	university	.2247	6.060	.001	7.910	.3703
#19	high school	university	.1493	5.061	.010	2.767	.2709
#21	high school	university	.1981	5.410	.001	6.810	.3281
#26	high school	university	.1803	5.264	.002	5.385	.3068
	technical school	university	.1592	5.969	.024	1.582	.3026
#28	technical school	university	.1684	5.871	.013	2.735	.3095
#30	high school	university	.1586	5.120	.006	3.559	.2816
#40	high school	university	.1440	5.394	.023	1.446	.2736
#47	high school	university	.1112	4.469	.040	3.800	.2185
#57	technical school	university	.1407	5.767	.045	2.152	.2793
#71	high school	technical school	-.2431	6.843	.001	-.4075	-7.8735
	technical school	university	.1867	5.995	.006	4.269	.3308
MODIFIERS							
#2	high school	technical school	.4186	5.377	.000	.2894	.5478
		university	.4698	4.154	.000	.3700	.5696
#6	high school	technical school	.3083	5.543	.000	.1752	.4415
		university	.3875	4.282	.000	.2846	.4903
#12	high school	technical school	.2162	5.585	.000	8.201	.3503
		university	.3614	4.315	.000	.2578	.4651
	technical school	university	.1453	4.893	.009	2.772	.2628
#14	high school	technical school	.2804	5.137	.000	.1570	.4038
		university	.3454	3.969	.000	.2501	.4408
#16	high school	technical school	.3005	5.113	.000	.1776	.4233
		university	.3538	3.950	.000	.2588	.4487
#31	high school	technical school	.3103	5.437	.000	.1797	.4409
		university	.3578	4.201	.000	.2569	.4587
#33	high school	technical school	.2564	5.823	.000	.1165	.3963
		university	.3415	4.499	.000	.2334	.4496
#50	high school	university	.2045	4.450	.000	9.757	.3114
#62	high school	university	.4318	4.427	.000	.3254	.5381
	technical school	university	.3489	5.020	.000	.2283	.4695
#67	high school	technical school	.2451	5.612	.000	.1103	.3799
		university	.2978	4.336	.000	.1936	.4020

Based on observed means.
The mean difference is significant at the .05 level.

TABLE 76. ITEMS BY SOCIAL STATUS FACTOR

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
SOCIAL CLASS	Pillai's Trace	.404	2.164	100.000	854.000	.000
	Wilks' Lambda	.619	2.310	100.000	852.000	.000
	Hotelling's Trace	.578	2.458	100.000	850.000	.000
	Roy's Largest Root	.504	4.305	50.000	427.000	.000

a Exact statistic
b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+CLASS

TABLE 77. ITEMS BY SOCIAL STATUS FACTOR

Tests of Between-Subjects Effects

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
#2	10.380	2	5.190	32.035	.000
#5	1.475	2	.737	3.655	.027
#6	9.501	2	4.750	29.798	.000
#12	6.262	2	3.131	18.963	.000
#14	6.665	2	3.333	24.072	.000
#16	8.640	2	4.320	32.168	.000
#23	5.927	2	2.963	13.306	.000
#26	3.031	2	1.515	6.535	.002
#30	4.950	2	2.475	11.622	.000
#31	4.905	2	2.452	15.348	.000
#33	4.835	2	2.417	13.503	.000
#40	1.573	2	.787	3.239	.040
#47	1.892	2	.946	5.736	.003
#48	1.461	2	.730	3.139	.044
#49	.668	2	.334	3.306	.037
#50	2.673	2	1.337	8.010	.000
#57	4.481	2	2.240	10.691	.000
#62	9.165	2	4.583	24.943	.000
#67	4.519	2	2.259	13.863	.000

TABLE 78. ITEMS BY SOCIAL STATUS FACTOR

Multiple Comparisons

Bonferroni

			Mean Difference (J-I)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) CLASS	(J) CLASS				Lower Bound	Upper Bound
NOUN-TITLES							
#5	2.00	3.00	-.1495	5.662	.026	-.2855	-1.350
#23	3.00	1.00	.3586	7.658	.000	.1746	.5426
		2.00	.2749	5.948	.000	.1320	.4178
#26	3.00	1.00	.2824	7.814	.001	9.466	.4701
#30	3.00	1.00	.3351	7.489	.000	.1551	.5150
		2.00	.2445	5.817	.000	.1048	.3843
#40	3.00	1.00	.1864	7.997	.061	-5.7185	.3786
		2.00	.1402	6.212	.073	-9.0005	.2895
#47	3.00	1.00	.2110	6.590	.004	5.269	.3694
		2.00	.1468	5.119	.013	2.378	.2698
#48	3.00	1.00	.1899	7.827	.047	1.834	.3779
#57	3.00	1.00	.3229	7.429	.000	.1445	.5014
		2.00	.2281	5.770	.000	8.946	.3667
MODIFIERS							
#2	3.00	1.00	.4695	6.532	.000	.3126	.6264
		2.00	.3678	5.073	.000	.2459	.4897
#6	3.00	1.00	.4574	6.479	.000	.3017	.6130
		2.00	.3452	5.033	.000	.2243	.4661
#12	3.00	1.00	.3798	6.594	.000	.2213	.5382
		2.00	.2719	5.122	.000	.1489	.3950
#14	1.00	2.00	-.1190	4.791	.040	-.2341	-3.858
		3.00	-.3954	6.038	.000	-.5404	-.2503
	2.00	3.00	-.2764	4.690	.000	-.3891	-.1637
#16	3.00	1.00	.4061	5.947	.000	.2632	.5490
		2.00	.3491	4.619	.000	.2382	.4601
#31	3.00	1.00	.3278	6.487	.000	.1719	.4836
		2.00	.2488	5.039	.000	.1277	.3698
#33	3.00	1.00	.3122	6.866	.000	.1472	.4772
		2.00	.2566	5.333	.000	.1284	.3847
#50	3.00	1.00	.2360	6.629	.001	7.671	.3952
		2.00	.1883	5.149	.001	6.459	.3120
#62	2.00	1.00	.1962	5.519	.001	6.363	.3288
	3.00	1.00	.4837	6.956	.000	.3166	.6508

		2.00	.2875	5.403	.000	.1577	.4173
#67	3.00	1.00	.3285	6.551	.000	.1711	.4859
		2.00	.2237	5.089	.000	.1014	.3459
VERBS							
#49	3.00	2.00	-.1003	4.007	.038	-.1966	-4.015

Based on observed means.
The mean difference is significant at the .05 level.

TABLE 79. ITEMS BY THE FACTOR OF RESIDENCE FROM 3 TO 10.

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
RESIDENCE 3 TO 10	Pillai's Trace	.380	1.239	150.000	1281.000	.033
	Wilks' Lambda	.665	1.239	150.000	1274.801	.033
	Hotelling's Trace	.438	1.238	150.000	1271.000	.034
	Roy's Largest Root	.183	1.564	50.000	427.000	.011

b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+RESIDENCE 3 TO 10

TABLE 80. ITEMS BY THE FACTOR OF RESIDENCE FROM 3 TO 10.

Tests of Between-Subjects Effects

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
#2	1.791	3	.597	3.309	.020
#5	3.765	3	1.255	6.360	.000
#6	2.345	3	.782	4.470	.004
#23	2.244	3	.748	3.239	.022
#31	1.391	3	.464	2.767	.041
#57	2.012	3	.671	3.116	.026
#67	1.360	3	.453	2.666	.047

TABLE 81. ITEMS BY THE FACTOR OF RESIDENCE FROM 3 TO 10.

Multiple Comparisons
Bonferroni

			Mean Difference (J-I)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) RESIDENCE 3 TO 10	(J) RESIDENCE 3 TO 10				Lower Bound	Upper Bound
NOUN-TITLES							
#5	villages	capital	.2064	6.089	.005	4.510	.3678
		big cities	.2589	6.967	.001	7.433	.4435
		towns	.2835	7.097	.000	9.545	.4715
#23	villages	towns	.2252	7.677	.021	2.180	.4286
#31	villages	towns	.1682	6.539	.062	-5.0263	.3415
#57	villages	capital	.1914	6.359	.017	2.290	.3599
MODIFIERS							
#2	villages	capital	.1740	5.823	.018	1.972	.3283
		towns	.1835	6.787	.043	3.664	.3633
#6	villages	capital	.1605	5.732	.032	8.629	.3123
		towns	.2396	6.680	.002	6.266	.4166
#67	capital	big cities	.1092	5.018	.180	-2.3728	.2422

Based on observed means.
The mean difference is significant at the .05 level.

TABLE 82. ITEMS BY THE FACTOR OF FATHER'S EDUCATION.

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
FATHER'S EDUCATION	Pillai's Trace	.273	1.326	100.000	838.000	.023
	Wilks' Lambda	.744	1.334	100.000	836.000	.021
	Hotelling's Trace	.322	1.342	100.000	834.000	.019
	Roy's Largest Root	.216	1.811	50.000	419.000	.001

a Exact statistic
b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+FATHER'S EDUCATION

TABLE 83. ITEMS BY THE FACTOR OF FATHER'S EDUCATION.

Tests of Between-Subjects Effects

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
#2	1.707	2	.854	4.768	.009
#5	2.975	2	1.488	7.485	.001
#7	2.673	2	1.336	6.187	.002
#11	1.770	2	.885	4.102	.017
#14	1.083	2	.541	3.621	.028
#15	1.851	2	.925	4.643	.010
#17	2.206	2	1.103	4.584	.011
#23	2.753	2	1.376	6.032	.003
#26	3.350	2	1.675	7.295	.001
#28	3.683	2	1.842	8.368	.000
#30	2.785	2	1.393	6.412	.002
#35	2.471	2	1.235	5.084	.007
#36	1.893	2	.946	5.366	.005
#40	2.823	2	1.411	5.914	.003
#47	1.444	2	.722	4.331	.014
#48	1.802	2	.901	3.885	.021
#51	3.089	2	1.544	7.131	.001
#52	4.464	2	2.232	10.018	.000
#57	5.174	2	2.587	12.460	.000
#62	1.924	2	.962	4.830	.008
#63	1.638	2	.819	3.352	.036
#66	1.655	2	.827	3.365	.035
#68	1.946	2	.973	4.129	.017
#71	2.877	2	1.438	6.146	.002

TABLE 84. ITEMS BY THE FACTOR OF FATHER'S EDUCATION.

Multiple Comparisons

Bonferroni

			Mean Difference (J-I)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) FATHER'S EDUCATION	(J) FATHER'S EDUCATION				Lower Bound	Upper Bound
NOUN-TITLES							
#5	high school	university	.1690	4.436	.000	6.240	.2755
#7	high school	university	.1621	4.624	.001	5.105	.2732
#11	high school	university	.1278	4.621	.018	1.682	.2389
#15	high school	university	.1347	4.442	.008	2.794	.2414
#17	high school	university	.1452	4.881	.009	2.798	.2625
#23	high school	university	.1481	4.753	.006	3.395	.2623
	technical school	university	.1674	6.795	.042	4.152	.3307
#26	high school	university	.1806	4.768	.001	6.602	.2951
#28	high school	university	.1778	4.668	.000	6.570	.2900
	technical school	university	.1768	6.673	.025	1.644	.3371
#30	high school	university	.1652	4.637	.001	5.380	.2766
#35	high school	university	.1563	4.905	.005	3.850	.2742
#36	high school	university	.1362	4.178	.004	3.581	.2366
#40	high school	university	.1662	4.860	.002	4.946	.2830
#47	high school	university	.1191	4.062	.011	2.153	.2167
#48	high school	university	.1225	4.791	.033	7.432	.2377
#51	high school	university	.1654	4.630	.001	5.414	.2766
#52	high school	university	.1797	4.696	.000	6.689	.2926
	technical school	university	.2311	6.714	.002	6.975	.3924
#57	high school	university	.2212	4.533	.000	.1123	.3301
	technical school	university	.1676	6.481	.030	1.191	.3233
#63	high school	university	.1273	4.917	.030	9.178	.2455
#66	high school	university	.1091	4.933	.083	-9.4681	.2276
#68	technical school	university	.1750	6.904	.035	9.089	.3409
#71	technical school	university	.2200	6.882	.004	5.470	.3854
MODIFIERS							
#2	high school	technical school	.1663	6.119	.021	1.923	.3133
#14	high school	university	.1005	3.847	.028	8.102	.1930
#62	high school	university	.1319	4.440	.009	2.525	.2386

The mean difference is significant at the .05 level.

TABLE 85. ITEMS BY THE FACTOR OF MOTHER'S EDUCATION

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
MOTHER'S EDUCATION	Pillai's Trace	.310	1.565	100.000	852.000	.001
	Wilks' Lambda	.711	1.577	100.000	850.000	.001
	Hotelling's Trace	.375	1.589	100.000	848.000	.000
	Roy's Largest Root	.254	2.165	50.000	426.000	.000

a Exact statistic

b The statistic is an upper bound on F that yields a lower bound on the significance level.

c Design: Intercept+MOTHER'S EDUCATION

TABLE 86. ITEMS BY THE FACTOR OF MOTHER'S EDUCATION

Tests of Between-Subjects Effects

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
#2	1.446	2	.723	3.994	.019
#5	4.189	2	2.094	10.720	.000
#7	3.264	2	1.632	7.630	.001
#11	1.971	2	.985	4.597	.011
#14	1.359	2	.680	4.534	.011
#15	3.422	2	1.711	8.812	.000
#17	1.980	2	.990	4.110	.017
#23	3.441	2	1.721	7.561	.001
#26	2.798	2	1.399	6.017	.003
#28	3.478	2	1.739	7.915	.000
#30	2.766	2	1.383	6.350	.002
#35	2.558	2	1.279	5.272	.005
#36	1.280	2	.640	3.593	.028
#40	2.625	2	1.313	5.459	.005
#45	1.475	2	.737	3.052	.048
#47	1.533	2	.767	4.620	.010
#52	4.883	2	2.442	11.042	.000
#57	4.410	2	2.205	10.541	.000
#62	3.663	2	1.832	9.366	.000
#71	1.488	2	.744	3.144	.044

TABLE 87. ITEMS BY THE FACTOR OF MOTHER'S EDUCATION

Multiple Comparisons

Bonferroni

			Mean Difference (J-I)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) MOTHER'S EDUCATION	(J) MOTHER'S EDUCATION				Lower Bound	Upper Bound
NOUN-TITLES							
#5	high school	technical school	.1508	5.787	.028	1.176	.2898
		university	.2037	4.471	.000	9.627	.3111
#7	high school	university	.1820	4.678	.000	6.958	.2943
#11	high school	university	.1416	4.683	.008	2.906	.2541
#15	high school	technical school	.1456	5.770	.036	6.991	.2842
		university	.1823	4.457	.000	7.524	.2894
#17	high school	university	.1322	4.964	.024	1.291	.2514
#23	high school	university	.1867	4.825	.000	7.078	.3026
#26	high school	university	.1678	4.878	.002	5.063	.2850
#28	high school	university	.1729	4.741	.001	5.903	.2868
	technical school	university	.1712	6.042	.014	2.599	.3163
#30	high school	university	.1674	4.720	.001	5.404	.2809
#35	high school	technical school	.1682	6.448	.028	1.326	.3231
		university	.1408	4.982	.015	2.114	.2605
#36	high school	university	.1138	4.269	.024	1.129	.2164
#40	high school	university	.1618	4.960	.004	4.260	.2809
#45	high school	university	.1214	4.971	.045	1.974	.2408

#47	high school	technical school	.1502	5.333	.015	2.203	.2783
#52	high school	university	.1752	4.756	.001	6.090	.2894
	technical school	university	.2473	6.062	.000	.1017	.3930
#57	high school	university	.2111	4.626	.000	.1000	.3223
#68	high school	university	.1186	4.908	.048	7.315	.2366
#71	technical school	university	.1456	6.272	.062	-5.1139	.2963
MODIFIERS							
#2	high school	technical school	.1417	5.571	.034	7.898	.2756
#14	high school	technical school	.1233	5.068	.046	1.509	.2450
		university	.1022	3.916	.028	8.130	.1963
#62	high school	university	.1919	4.473	.000	8.442	.2993

Based on observed means.
The mean difference is significant at the .05 level.

TABLE 88. ITEMS BY SEX FACTOR

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
SEX	Pillai's Trace	.006	1.005	3.000	466.000	.390
	Wilks' Lambda	.994	1.005	3.000	466.000	.390
	Hotelling's Trace	.006	1.005	3.000	466.000	.390
	Roy's Largest Root	.006	1.005	3.000	466.000	.390

a Computed using alpha = .05
b Exact statistic

TABLE 89. ITEMS BY THE FACTOR OF PARENTS' AREA OF RESIDENCE

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
PARENTS' AREA	Pillai's Trace	.219	1.042	100.000	846.000	.377
	Wilks' Lambda	.792	1.042	100.000	844.000	.376
	Hotelling's Trace	.248	1.042	100.000	842.000	.375
	Roy's Largest Root	.151	1.281	50.000	423.000	.104

a Exact statistic
b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+PARENT'S AREA

TABLE 90. ITEMS BY THE FACTOR OF PARENTS' ORIGIN

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
PARENTS' ORIGIN	Pillai's Trace	.207	.949	100.000	822.000	.622
	Wilks' Lambda	.803	.950	100.000	820.000	.618
	Hotelling's Trace	.233	.952	100.000	818.000	.614
	Roy's Largest Root	.148	1.221	50.000	411.000	.154

b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+PARENTS' ORIGIN

TABLE 91. CLUSTER ANALYSIS

Proximity Matrix

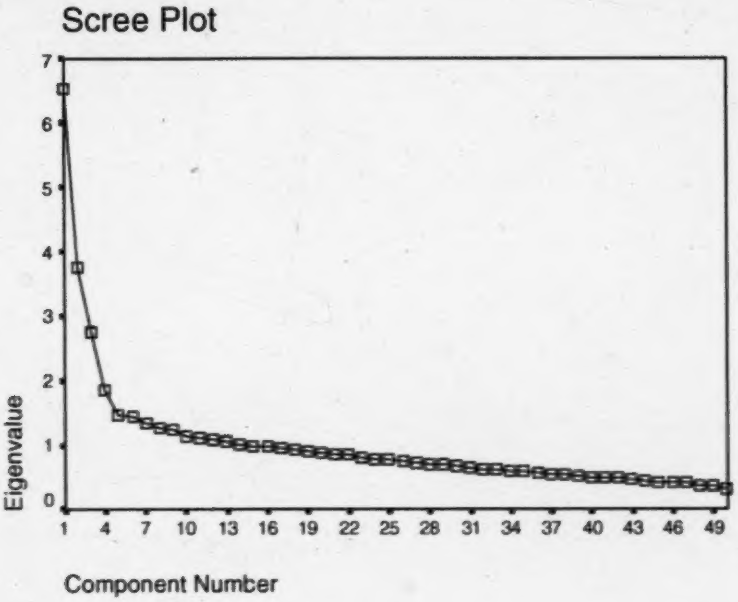
	Matrix File Input												
Case	#2	#3	#5	#6	#7	#9	#10	#11	#12	#14	#15	#16	#17
#2		.008	.112	.479	.007	.065	.005	.012	.378	.359	.074	.271	.083
#3	.008		.071	.015	.002	.275	.004	.048	.001	.023	.070	.057	.070
#5	.112	.071		.092	.229	.030	.107	.204	.041	.139	.224	.091	.171
#6	.479	.015	.092		.000	.006	.016	.069	.335	.310	.040	.297	.023
#7	.007	.002	.229	.000		.028	.216	.320	.018	.021	.282	.044	.189
#9	.065	.275	.030	.006	.028		.063	.089	.066	.039	.084	.041	.002
#10	.005	.004	.107	.016	.216	.063		.009	.065	.041	.145	.043	.066
#11	.012	.048	.204	.069	.320	.089	.009		.013	.029	.258	.017	.061
#12	.378	.001	.041	.335	.018	.066	.065	.013		.402	.029	.300	.144
#14	.359	.023	.139	.310	.021	.039	.041	.029	.402		.029	.393	.081
#15	.074	.070	.224	.040	.282	.084	.145	.258	.029	.029		.091	.052
#16	.271	.057	.091	.297	.044	.041	.043	.017	.300	.393	.091		.026
#17	.083	.070	.171	.023	.189	.002	.066	.061	.144	.081	.052	.026	
#19	.144	.021	.200	.191	.019	.052	.036	.051	.206	.172	.088	.137	.105
#20	.095	.168	.046	.157	.029	.118	.003	.082	.073	.099	.157	.037	.041
#21	.200	.018	.078	.142	.050	.001	.011	.123	.217	.191	.147	.126	.123
#23	.103	.047	.291	.089	.229	.077	.076	.130	.144	.187	.118	.132	.156
#24	.008	.063	.254	.039	.306	.028	.247	.223	.003	.063	.254	.099	.130
#26	.108	.000	.197	.094	.208	.046	.072	.082	.099	.163	.200	.152	.212
#28	.090	.029	.165	.066	.164	.104	.037	.172	.011	.014	.250	.053	.059
#30	.122	.033	.224	.169	.110	.008	.004	.170	.173	.153	.198	.153	.098
#31	.336	.036	.075	.399	.028	.052	.003	.044	.294	.324	.005	.298	.007
#33	.374	.061	.020	.310	.030	.076	.012	.006	.280	.219	.066	.256	.024
#35	.002	.082	.215	.030	.221	.075	.096	.094	.046	.090	.186	.101	.224
#36	.022	.035	.196	.023	.303	.040	.169	.277	.050	.011	.233	.024	.139
#37	.017	.104	.004	.036	.066	.170	.074	.089	.011	.013	.051	.061	.041
#38	.003	.040	.125	.021	.119	.049	.199	.145	.027	.089	.099	.056	.185
#40	.148	.016	.243	.137	.119	.006	.075	.066	.121	.239	.183	.207	.110
#42	.089	.080	.227	.102	.128	.084	.065	.037	.048	.038	.183	.081	.152
#44	.037	.044	.137	.064	.157	.129	.123	.071	.029	.069	.090	.069	.161
#45	.061	.003	.121	.105	.074	.068	.068	.063	.091	.068	.121	.079	.137
#47	.149	.048	.317	.113	.066	.042	.057	.062	.164	.262	.116	.144	.154
#48	.080	.076	.116	.056	.028	.057	.030	.077	.039	.119	.169	.085	.125
#49	.019	.169	.020	.043	.040	.274	.030	.062	.073	.030	.012	.013	.002
#50	.233	.023	.125	.295	.022	.029	.071	.039	.310	.369	.102	.369	.104
#51	.036	.094	.153	.009	.219	.061	.101	.103	.023	.037	.177	.043	.105
#52	.022	.104	.258	.049	.192	.058	.070	.096	.045	.021	.183	.009	.072
#55	.040	.247	.060	.030	.047	.350	.019	.004	.113	.029	.093	.050	.036
#57	.117	.024	.323	.122	.255	.123	.090	.096	.147	.144	.193	.213	.157
#59	.046	.089	.040	.059	.081	.242	.001	.019	.075	.009	.118	.048	.018
#60	.036	.163	.019	.009	.024	.211	.027	.009	.040	.011	.025	.048	.057
#62	.237	.006	.092	.120	.004	.002	.066	.049	.234	.300	.010	.252	.098
#63	.030	.086	.245	.033	.230	.013	.123	.212	.009	.008	.185	.040	.082
#64	.053	.179	.041	.069	.006	.264	.025	.065	.075	.014	.088	.036	.005
#66	.067	.103	.142	.106	.075	.115	.014	.085	.071	.136	.131	.082	.198
#67	.304	.042	.069	.354	.010	.016	.025	.028	.298	.330	.068	.330	.053
#68	.035	.081	.168	.071	.184	.101	.051	.155	.077	.071	.211	.093	.106
#69	.012	.026	.091	.107	.107	.064	.032	.160	.083	.085	.143	.107	.123
#70	.091	.179	.078	.054	.085	.211	.045	.047	.021	.069	.014	.013	.008
#71	.020	.037	.201	.004	.269	.054	.151	.148	.021	.002	.195	.024	.107

Case	#19	#20	#21	#23	#24	#26	#28	#30	#31	#33	#35	#36	#37
#2	.144	.095	.200	.103	.008	.108	.090	.122	.336	.374	.002	.022	.017
#3	.021	.168	.018	.047	.063	.000	.029	.033	.036	.061	.082	.035	.104
#5	.200	.046	.078	.291	.254	.197	.165	.224	.075	.020	.215	.196	.004
#6	.191	.157	.142	.089	.039	.094	.066	.169	.399	.310	.030	.023	.036
#7	.019	.029	.050	.229	.306	.208	.164	.110	.028	.030	.221	.303	.066
#9	.052	.118	.001	.077	.028	.046	.104	.008	.052	.076	.075	.040	.170
#10	.036	.003	.011	.076	.247	.072	.037	.004	.003	.012	.096	.169	.074
#11	.051	.082	.123	.130	.223	.082	.172	.170	.044	.006	.094	.277	.089
#12	.206	.073	.217	.144	.003	.099	.011	.173	.294	.280	.046	.050	.011
#14	.172	.099	.191	.187	.063	.163	.014	.153	.324	.219	.090	.011	.013
#15	.088	.157	.147	.118	.254	.200	.250	.198	.005	.066	.186	.233	.051
#16	.137	.037	.126	.132	.099	.152	.053	.153	.298	.256	.101	.024	.061
#17	.105	.041	.123	.156	.130	.212	.059	.098	.007	.024	.224	.139	.041
#19		.058	.309	.147	.069	.193	.115	.189	.093	.136	.106	.025	.009
#20	.058		.003	.010	.019	.019	.046	.051	.081	.034	.033	.127	.014
#21	.309	.003		.082	.015	.160	.082	.209	.072	.242	.027	.057	.069
#23	.147	.010	.082		.064	.404	.104	.274	.091	.113	.336	.079	.019
#24	.069	.019	.015	.064		.137	.108	.101	.008	.034	.093	.341	.025
#26	.193	.019	.160	.404	.137		.195	.363	.077	.058	.305	.052	.015
#28	.115	.046	.082	.104	.108	.195		.214	.017	.026	.312	.149	.155
#30	.189	.051	.209	.274	.101	.363	.214		.105	.103	.172	.055	.020
#31	.093	.081	.072	.091	.008	.077	.017	.105		.260	.025	.062	.027
#33	.136	.034	.242	.113	.034	.058	.026	.103	.260		.000	.047	.089
#35	.106	.033	.027	.336	.093	.305	.312	.172	.025	.000		.054	.124
#36	.025	.127	.057	.079	.341	.052	.149	.055	.062	.047	.054		.009
#37	.009	.014	.069	.019	.025	.015	.155	.020	.027	.089	.124	.009	
#38	.103	.071	.078	.170	.225	.242	.224	.086	.012	.032	.080	.267	.064
#40	.151	.087	.179	.245	.179	.282	.182	.262	.206	.086	.179	.078	.024
#42	.226	.088	.098	.191	.128	.351	.273	.166	.038	.031	.385	.033	.142
#44	.109	.039	.001	.139	.104	.122	.039	.107	.035	.115	.120	.128	.006
#45	.111	.055	.051	.127	.151	.253	.142	.104	.084	.031	.194	.081	.057
#47	.195	.053	.067	.285	.068	.270	.110	.207	.087	.122	.226	.023	.026
#48	.097	.015	.061	.146	.095	.321	.089	.169	.068	.050	.218	.011	.020
#49	.009	.048	.041	.021	.034	.079	.083	.046	.002	.088	.049	.048	.247
#50	.150	.078	.224	.124	.043	.151	.034	.172	.275	.287	.095	.031	.006
#51	.062	.050	.026	.106	.211	.206	.259	.068	.005	.070	.298	.141	.141
#52	.113	.034	.046	.178	.071	.178	.284	.212	.062	.031	.242	.082	.008
#55	.065	.054	.082	.015	.003	.136	.034	.017	.010	.040	.118	.077	.139
#57	.132	.005	.012	.334	.144	.324	.159	.277	.109	.120	.285	.157	.076
#59	.075	.076	.045	.002	.010	.068	.098	.053	.025	.036	.081	.100	.103
#60	.065	.024	.063	.041	.035	.049	.052	.031	.075	.071	.074	.026	.057
#62	.157	.075	.199	.174	.043	.167	.071	.153	.217	.165	.008	.018	.048
#63	.115	.037	.125	.213	.213	.165	.250	.208	.012	.051	.206	.202	.011
#64	.084	.104	.132	.031	.016	.069	.104	.020	.049	.101	.111	.029	.094
#66	.176	.005	.092	.149	.147	.237	.061	.195	.074	.141	.210	.088	.036
#67	.107	.049	.194	.093	.001	.058	.008	.044	.349	.310	.014	.043	.006
#68	.115	.005	.136	.203	.165	.320	.200	.151	.113	.004	.262	.159	.014
#69	.116	.073	.104	.119	.164	.166	.195	.135	.087	.012	.226	.121	.027
#70	.009	.007	.032	.034	.021	.022	.067	.023	.070	.080	.057	.036	.091
#71	.121	.021	.062	.227	.226	.185	.202	.120	.018	.030	.263	.194	.071

Case	#38	#40	#42	#44	#45	#47	#48	#49	#50	#51	#52	#55
#2	.003	.148	.089	.037	.061	.149	.080	.019	.233	.036	.022	.040
#3	.040	.016	.080	.044	.003	.048	.076	.169	.023	.094	.104	.247
#5	.125	.243	.227	.137	.121	.317	.116	.020	.125	.153	.258	.060
#6	.021	.137	.102	.064	.105	.113	.056	.043	.295	.009	.049	.030
#7	.119	.119	.128	.157	.074	.066	.028	.040	.022	.219	.192	.047
#9	.049	.006	.084	.129	.068	.042	.057	.274	.029	.061	.058	.350
#10	.199	.075	.065	.123	.068	.057	.030	.030	.071	.101	.070	.019
#11	.145	.066	.037	.071	.063	.062	.077	.062	.039	.103	.096	.004
#12	.027	.121	.048	.029	.091	.164	.039	.073	.310	.023	.045	.113
#14	.089	.239	.038	.069	.068	.262	.119	.030	.369	.037	.021	.029
#15	.099	.183	.183	.090	.121	.116	.169	.012	.102	.177	.183	.093
#16	.056	.207	.081	.069	.079	.144	.085	.013	.369	.043	.009	.050
#17	.185	.110	.152	.161	.137	.154	.125	.002	.104	.105	.072	.036
#19	.103	.151	.226	.109	.111	.195	.097	.009	.150	.062	.113	.065
#20	.071	.087	.088	.039	.055	.053	.015	.048	.078	.050	.034	.054
#21	.078	.179	.098	.001	.051	.067	.061	.041	.224	.026	.046	.082
#23	.170	.245	.191	.139	.127	.285	.146	.021	.124	.106	.178	.015
#24	.225	.179	.128	.104	.151	.068	.095	.034	.043	.211	.071	.003
#26	.242	.282	.351	.122	.253	.270	.321	.079	.151	.206	.178	.136
#28	.224	.182	.273	.039	.142	.110	.089	.083	.034	.259	.284	.034
#30	.086	.262	.166	.107	.104	.207	.169	.046	.172	.068	.212	.017
#31	.012	.206	.038	.035	.084	.087	.068	.002	.275	.005	.062	.010
#33	.032	.086	.031	.115	.031	.122	.050	.088	.287	.070	.031	.040
#35	.080	.179	.385	.120	.194	.226	.218	.049	.095	.298	.242	.118
#36	.267	.078	.033	.128	.081	.023	.011	.048	.031	.141	.082	.077
#37	.064	.024	.142	.006	.057	.026	.020	.247	.006	.141	.006	.139
#38		.059	.274	.051	.223	.077	.103	.009	.078	.208	.174	.073
#40	.059		.174	.175	.157	.211	.224	.046	.176	.101	.167	.001
#42	.274	.174		.108	.284	.208	.256	.048	.067	.357	.291	.136
#44	.051	.175	.108		.173	.084	.025	.097	.074	.102	.083	.079
#45	.223	.157	.284	.173		.079	.201	.026	.102	.207	.137	.080
#47	.077	.211	.208	.084	.079		.262	.004	.180	.131	.165	.007
#48	.103	.224	.256	.025	.201	.262		.022	.164	.164	.100	.083
#49	.009	.046	.048	.097	.026	.004	.022		.001	.050	.032	.215
#50	.078	.176	.067	.074	.102	.180	.164	.001		.023	.080	.089
#51	.208	.101	.357	.102	.207	.131	.164	.050	.023		.127	.208
#52	.174	.167	.291	.083	.137	.165	.100	.032	.080	.127		.020
#55	.073	.001	.136	.079	.080	.007	.083	.215	.089	.208	.020	
#57	.156	.233	.224	.181	.064	.299	.192	.062	.167	.240	.259	.059
#59	.027	.001	.095	.071	.050	.009	.015	.365	.014	.138	.105	.343
#60	.011	.017	.116	.040	.075	.042	.013	.243	.037	.151	.013	.289
#62	.061	.149	.032	.015	.009	.118	.075	.023	.209	.071	.058	.015
#63	.211	.177	.227	.094	.137	.138	.147	.041	.058	.236	.252	.094
#64	.125	.048	.133	.120	.087	.013	.061	.173	.139	.104	.028	.359
#66	.120	.284	.214	.118	.152	.192	.267	.092	.217	.139	.155	.132
#67	.006	.094	.036	.042	.010	.094	.007	.033	.390	.020	.005	.064
#68	.192	.156	.311	.152	.258	.120	.127	.017	.131	.310	.222	.136
#69	.183	.112	.162	.129	.170	.093	.175	.026	.095	.151	.101	.099
#70	.032	.023	.094	.040	.068	.041	.010	.227	.027	.144	.057	.263
#71	.193	.163	.268	.110	.163	.135	.142	.020	.084	.294	.251	.068

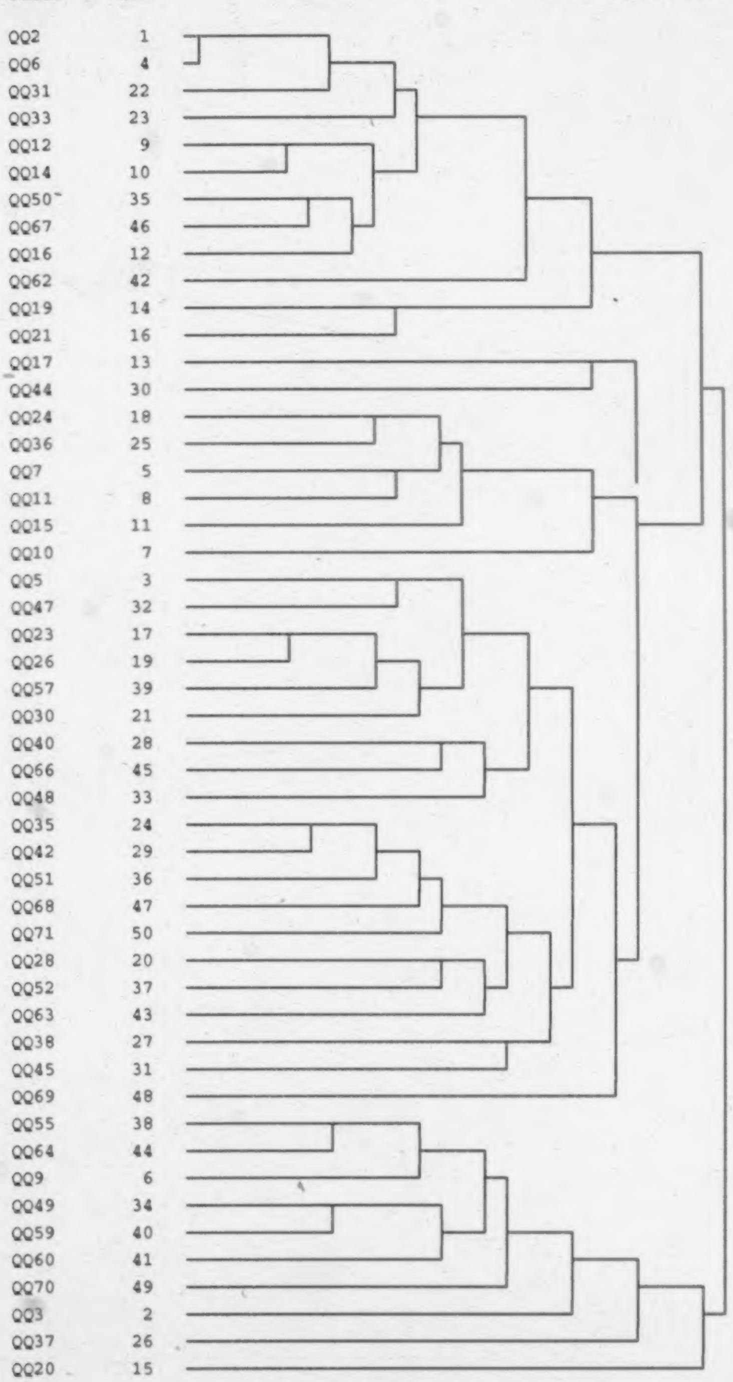
Case	#57	#59	#60	#62	#63	#64	#66	#67	#68	#69	#71
#2	.117	.046	.036	.237	.030	.053	.067	.304	.035	.012	.020
#3	.024	.089	.163	.006	.086	.179	.103	.042	.081	.026	.037
#5	.323	.040	.019	.092	.245	.041	.142	.069	.168	.091	.201
#6	.122	.059	.009	.120	.033	.069	.106	.354	.071	.107	.004
#7	.255	.081	.024	.004	.230	.006	.075	.010	.184	.107	.269
#9	.123	.242	.211	.002	.013	.264	.115	.016	.101	.064	.054
#10	.090	.001	.027	.066	.123	.025	.014	.025	.051	.032	.151
#11	.096	.019	.009	.049	.212	.065	.085	.028	.155	.160	.148
#12	.147	.075	.040	.234	.009	.075	.071	.298	.077	.083	.021
#14	.144	.009	.011	.300	.008	.014	.136	.330	.071	.085	.002
#15	.193	.118	.025	.010	.185	.088	.131	.068	.211	.143	.195
#16	.213	.048	.048	.252	.040	.036	.082	.330	.093	.107	.024
#17	.157	.018	.057	.098	.082	.005	.198	.053	.106	.123	.107
#19	.132	.075	.065	.157	.115	.084	.176	.107	.115	.116	.121
#20	.005	.076	.024	.075	.037	.104	.005	.049	.005	.073	.021
#21	.012	.045	.063	.199	.125	.132	.092	.194	.136	.104	.062
#23	.334	.002	.041	.174	.213	.031	.149	.093	.203	.119	.227
#24	.144	.010	.035	.043	.213	.016	.147	.001	.165	.164	.226
#26	.324	.068	.049	.167	.165	.069	.237	.058	.320	.166	.185
#28	.159	.098	.052	.071	.250	.104	.061	.008	.200	.195	.202
#30	.277	.053	.031	.153	.208	.020	.195	.044	.151	.135	.120
#31	.109	.025	.075	.217	.012	.049	.074	.349	.113	.087	.018
#33	.120	.036	.071	.165	.051	.101	.141	.310	.004	.012	.030
#35	.285	.081	.074	.008	.206	.111	.210	.014	.262	.226	.263
#36	.157	.100	.026	.018	.202	.029	.088	.043	.159	.121	.194
#37	.076	.103	.057	.048	.011	.094	.036	.006	.014	.027	.071
#38	.156	.027	.011	.061	.211	.125	.120	.006	.192	.183	.193
#40	.233	.001	.017	.149	.177	.048	.284	.094	.156	.112	.163
#42	.224	.095	.116	.032	.227	.133	.214	.036	.311	.162	.268
#44	.181	.071	.040	.015	.094	.120	.118	.042	.152	.129	.110
#45	.064	.050	.075	.009	.137	.087	.152	.010	.258	.170	.163
#47	.299	.009	.042	.118	.138	.013	.192	.094	.120	.093	.135
#48	.192	.015	.013	.075	.147	.061	.267	.007	.127	.175	.142
#49	.062	.365	.243	.023	.041	.173	.092	.033	.017	.026	.020
#50	.167	.014	.037	.209	.058	.139	.217	.390	.131	.095	.084
#51	.240	.138	.151	.071	.236	.104	.139	.020	.310	.151	.294
#52	.259	.105	.013	.058	.252	.028	.155	.005	.222	.101	.251
#55	.059	.343	.289	.015	.094	.359	.132	.064	.136	.099	.068
#57		.062	.006	.151	.150	.008	.158	.145	.195	.123	.256
#59	.062		.317	.013	.085	.227	.018	.106	.101	.016	.114
#60	.006	.317		.006	.078	.260	.023	.067	.053	.028	.006
#62	.151	.013	.006		.003	.063	.095	.243	.152	.046	.042
#63	.150	.085	.078	.003		.069	.266	.038	.230	.116	.213
#64	.008	.227	.260	.063	.069		.082	.150	.078	.089	.035
#66	.158	.018	.023	.095	.266	.082		.115	.147	.224	.145
#67	.145	.106	.067	.243	.038	.150	.115		.079	.115	.022
#68	.195	.101	.053	.152	.230	.078	.147	.079		.146	.278
#69	.123	.016	.028	.046	.116	.089	.224	.115	.146		.043
#70	.090	.281	.209	.039	.049	.193	.030	.004	.019	.069	.109
#71	.256	.114	.006	.042	.213	.035	.145	.022	.278	.043	

PLOT 49. FACTOR ANALYSIS.
Scree Plot



PLOT 50. HIERARCHICAL CLASTER ANALYSIS

Dendrogram using Average Linkage (Between Groups)



APPENDIX B.

PILOT STUDY QUESTIONNAIRE

I. Пол_______________

II. Год рождения____________________

III. Образование__________________________________

IV. Место наиболее длительного проживания в бывшем СССР:

____

V. Место проживания с 3-х до 10-и лет____________________________________

VI. Социальное положение____

VII. Место откуда происходят родители____________________________________

VIII. Социальное положение родителей_______________________________________

***

1. - Кто сегодня принимает? – Вот эт____ молод____ врач_____. Ее фамилия Плетнева.
2. Нов___ педагог Куликова сказал___, что нужно поднять образовательный уровень учащихся.
3. После школы она освоила специальность дояр____ .
4. Он вспомнил, что уже слышал ее фамилию: она работала преподавател___ русского языка в институте.
5. Вера, ты права, в нашем отделе действительно когда-то работал__ эт___ геолог Таня Иванова.
6. В этом месяце на доске почета появится новая фотография: это Ирина Селезнева, старш____ мастер строгального цеха.
7. – Ей очень хотелось стать студент____ физико-математического факультета.
8. – Как тебе нравится эт___ Миткова, диктор____ на телевидении?
9. В коридоре он встретил Позднякову, заведующ____ отделом труда.
10. Мам, наш___ нов___ учитель______ сказала, что я хорошо подготовился к уроку.
11. – Я давно ее не видела, но слышала, что она воспитатель_____ в детском саду.

12. – Она уже давно работает у нас лаборант_____.

13. – Ребята, урока не будет! Математи______ заболела.

14. Рябинина – многократн____ чемпион_____ страны по плаванию в этом стиле.

15. Девочки, я вчера пошла после уроков в кино и видела там Анну Ивановну, наш____ директ_____!

16. Анна Ахматова – поэт____ с выдающимся талантом.

17. Главн___ врач Стеклова часто заходит в его отделение.

18. Весной к нам в деревню приехал___ районн___ уполномоченн____ Смирнова.

19. Свиридова, молод____ учен___ , разработал___ эту концепцию.

20. – Вера Ивановна! Пока вас не было, приходила почтальон____.

21. – Сегодня на нашем собрании мы чествуем хорошо известного члена нашего коллектива. Это учител____ Лариса Ивановна Кириллова.

22. – Нина Петровна, табельщ____ для вас, наверное самая подходящая должность.

23. Вера отличн____ по всем показателям.

24. Леонова – больш____ энтузиаст_____ своего дела.

25. Последние десять лет Семеновна работает лифтер____.

26. Зайцев известный всем фигурист, а вот Волкова, его партн____, не так хорошо знакома широкой публике.

27. Раздвигая людей, к дворни_______ Степановой подошел милиционер.

28. Кассир_____ Таня опять неправильно выдала сдачу

29. Парикмахер____ Лида как раз в это время делала ей завивку.

30. Работа у нее не бог весть что: кондуктор___ на пригородных автобусах.

31. Вера была не в духе, комендант____ опять ее за что-то отчитала .

32. Я это говорю тебе как меди_____, а не как женщине.

33. Позвольте представить вам дебютант___ наших соревнований, Велентину Сафронову. Она также едиственн____ исполнитель____ этого элемента.

34. Фельдшер_____ ночной смены не очень понравилась ему.

35. Она всегда мечтала стать писател_______.

36. Для женщины работа в должности наборщи_____ это тяжелый труд.

37. И все-таки она неплох_____ переводч_______.

38. Оппонент____ на его защите была профессор Тимирязева.

39. После этого ее трудно назвать патриот_____.

40. И вот в 1985 году Веру Павловну выбрали депутат_____.

41. – Давайте похлопаем наш____ юбиляр____, Серафиме Григорьевне Говоровой!

42. Татьяна – активист____ нашего движения.

43. – А вот и Виктория, делегат_____ от Московского района.

44. Во время войны многие наши женщины работали фрезеровщи_____, крановщи______ и так далее.

45. Галина сейчас работает ассистент_____ профессора Веденеева.

46. Демидова – рельн____ претендент___ на завоевание титула чемпиона Европы по стендовой стрельбе.

47. Они обратились за помощью к акушер____ Климовой.

48. Эта симпатичная девушка – практикант____ в нашем отделе.

49. Хоть и должность у нее небольшая, санитар____ , работает она исключительно добросовестно.

50. Мама у нее была инвалид_____.

51. Мы сегодня встречались с корреспондент_____ “Независимой газеты” Ивановой.

52. Должность кладовщи_____ была для нее своеобразным повышением по службе.

53. Сам____ женорг_____ Дмитриева даже приходил___ к нам по этому поводу.

54. Генриетту Тираспольских с полным правом можно назвать настоящ____ музыкант_____.

55. Доронина – перв____ автор____ этого цикла работ.

56. На этом снимке вы видите тех, чьи руки делают эти чудесные ткани: красильщи_____ Ирину Русанову, художни______ Надежду Линькову и гравер______ Валентину Власову.

APPENDIX C.

MAIN EXPERIMENT QUESTIONNAIRE

ПОДТВЕРЖДЕНИЕ СОГЛАСИЯ ДЛЯ УЧАСТИЯ ЭКСПЕРИМЕНТЕ

Данный эксперимент проводится не с целью определения знания русского языка. Вы можете прервать свое участие в эксперименте в любое время без каких-либо последтвий. Проводимое исследование анонимно, анализ будет производиться на основе объединения всех данных. Результаты эксперимента могут быть представлены по требованию.

Приведите, пожалуйста, следующие сведения:

I. Пол _____

II. Год рождения _______

III. Образование: высш. ______ ; незак. высш. ______; средн. спец. _______;
средн. _______; начальное _______.

IV. Место наиболее длительного проживания в бывшем СССР: респ.
___________________, гор./дер. _______________

V. Место проживания с 3-х до 10-и лет: респ. _________________________,
гор./дер. ______________________

VI. Место работы: ___________________________,
должность: _________________________

VII. Местность откуда происходят родители:
отец – респ. ____________________, гор./дер.__________________________;
мать – респ. ____________________, гор./дер. __________________________

VIII. Образовательный уровень родителей:
отец - ________________, мать - _______________

IX. Продолжительность проживания в Канаде: _________________________

"Я даю согласие участвовать в эксперименте на добровольных началах."

Дата: ______________ Подпись:___________________

* * *

Заполните пропуски:

1. Она его оскорбила, а он даже не подал вид____.
2. На собрании нов____ педагог, Надежда Степановна, говорила о том, что нужно больше работать с родителями.
3. Геолог Семенова действительно когда-то работал____ у нас.
4. В войну они все чуть не умерли от голод_____.
5. Ей давно хотелось поработать преподавател_____ английского языка.
6. Участков____ врач Галина Викторовна бережно относится к своим пациентам
7. С 1978 года она студент____ физико-математического факультета.
8. Дворники насыпали на дорожки слишком много песк____.
9. Сегодня в Париж прилетел____ министр культуры Фурцева.
10. После войны ее назначили на новую должность: заведующ____ РОНО.
11. Наш____ учитель_____ по математике, Ирина Петровна, сказала, что поставит мне пятерку в четверти.
12. – Пожалуйста, познакомьтесь! Светлана Иванова, молод____ мастер арматурного цеха.
13. Потом он подлил себе в чай еще немного кипятк____.
14. – Что бы вы ни говорили, Муратова – очень хорош____ референт.
15. Раиса Сметанина – чемпион____ мира в эстафетной гонке.
16. В нашей практике Алла – перв____ стажер с такими прекрасными результатами.
17. Белла Ахмадулина – это поэт____ в полном смысле этого слова.
18. Он любит пить чай без сахар____.
19. Через неделю после этого происшествия приехала к нам районн____ уполномоченн____.
20. Филина, бригадир нашего участка, находил_____ (находиться) в декретном отпуске.

21. Сегодня свою докторскую диссертацию защищает молод____ учен____ Ольга Смирнова.
22. Вдруг они заметили, что дома совсем не было ча____ (чай).
23. Вообще-то ее должность – лаборант____.
24. Она отлични_____ по всем показателям.
25. – Добавьте мне еще немного творог____, пожалуйста!
26. В отличии от тебя, Саша, Нина - энтузиаст_____ своего дела.
27. Вот он и переехал из Краснодарского кра____ (край) в Красноярский.
28. С прошлого года его партнер____ по танцам стала Ольга Васильева.
29. Из этих яблок можно нагнать много сок____.
30. Там же стояла и Сидорова, кассир____.
31. У нее есть даже сво____ парикмахер, Людой зовут.
32. Вика добавила еще немного сыр____ в салат.
33. – Я все это уже много раз слышала, - сказала им строг____ комендант нашего общежития.
34. "Больше суп____ я не хочу!" – заявил Сережка.
35. – Перед вами дебютант____ наших соревнований – Строганова Маша.
36. Света и есть виновник____ нашего сегодняшнего торжества!
37. Но вот фельдшер Татьяна Ивановна приш____ (прийти) поставить ему банки.
38. Когда Сашу коллеги называли писател____, ей становилось не по себе.
39. А в столовой на третье опять не было компот____.
40. Она прекрасно пишет стихи и статьи, и она неплох____ переводчи_____.
41. Вот и я говорю ему: "Китайцы не могут без рис____."
42. – Лена, ты совсем не патриот____, говоришь такие глупости!
43. При строительстве детской площадки не хватило грав____ (гравий).
44. Управляющ____ делами назначена Людмила Широкова.
45. Несмотря на свою молодость она уже в течение многих лет активист_____ нашего движения.
46. Вот они и подсыпали ему в вино немного яд____.
47. Вы слышали, профессор Куликова на его защите была оппонент____.

48. После аспирантуры ее взяли на работу в клинику, ассистент____ профессора Лебедева.

49. Торжественный вечер открыл____ председатель правления Попова.

50. Известн____ филолог уже Граудина исследовала этот вопрос.

51. Иосселиани – претендент____ на завоевание шахматной короны у женщин.

52. Акушер____ Иванова прекрасно справляется со своей работой.

53. Вова все кричал: "Ничего не хочу, дайте еще мармелад____!"

54. В эту зиму у нас было мало снег____.

55. Это был____ врач-рентегенолог Надежда Баянова.

56. Аппетит____ у него хоть отбавляй.

57. Она сейчас работает корреспондент____ газеты "Смена."

58. – Такого бред____ я уже давно не слышал.

59. На станции вдруг тяжело заболел____ синоптик Баркова.

60. Редактор просмотрел_____ рукопись, и у нее появились некоторые замечания.

61. В их спорах было много вздор____.

62. Пирогова – безусловн____ автор этой концепции.

63. – Слышала, где Света сейчас работает? – Она воспитатель_____ в детском саду.

64. Господа, к нам приехал____ ревизор из налоговой инспекции Дмитриева.

65. Как говорится, не хватило у него порох____.

66. Никонова – художни____ с большим талантом.

67. Энергичн____ директор фирмы сразу начала проводить приватизацию.

68. Хотя не все у нее получается, она оптимист____.

69. Оксана единственн____ исполнитель____ тройного акселя в нашей команде.

70. Собравшихся приветствовал____ директор школы Анна Ивановна.

71. Лена не работает у нас постоянно, она только практикант_____.